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MARITIME DISCOVERY.

MARITIME DISCOVERY:

A HISTORY OF NAUTICAL EXPLORATION

FROM THE EARLIEST TIMES.

BY

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IN TWO VOLUMES.

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PREFACE.

In accordance with a general practice which, in many instances, however, would be 'more honoured in the breach than in the observance,' I lay before the reader this Preface, apologising for its appearance by the explanation that it is in the nature of an Introduction describing the objects and scope of the work.

To write a preface is not only a general, but an ancient, practice, as I was reminded lately when perusing a translation of a curious old book, 'The Visions of Dom Francisco De Quevedo Villegas,' 'made English,' in 1696, by Sir Roger L'Estrange, a famous man of letters contemporary with Dryden, who gives certain reasons for following the custom of writing a preface, which certainly display great candour on his part. 'This preface,' says L'Estrange, 'is merely for fashion sake, to fill a space, and please the stationer, who says 'tis neither usual nor handsome to leap immediately from the title-page to the matter.'

Far other is my object in writing these introductory lines. Briefly, it is to point out that though Travels by Sea and Land have filled countless volumes, no com-

pendious work has been published dealing with the great subject of Maritime Discovery in a complete, if necessarily succinct, form. I do not lay claim to any originality either in the matter of these volumes or its treatment. No 'hitherto unpublished manuscripts' have been unearthed by me, but I have merely had recourse to the vast tomes in which our forefathers delighted to bury their learning and research, and thence have disinterred a continuous record of nautical research. The volumes of Churchill, Pinkerton, Hakluyt, and other old writers, treating of voyages and discoveries, form a considerable library in themselves, and even later authors, compiling from these, are too diffuse for the present generation of readers, who prefer knowledge presented to them in a 'concentrated' form, like the extracts of meat which compress the nutritious essence of a bullock into a single tin. This work, then, is in the nature of a survey, but, I believe, every voyage of discovery, with its results, has been recorded, and, I trust, the reader will consider the task—which to me has been a congenial one, from a natural taste for geographical studies and some experience in this branch of literature—has been completed in an attractive form.

Chief among the old authors I have consulted in that portion of the work dealing with the discoveries of the Spaniards and Portuguese, are Harris, Dalrymple, and Burney. The importance of the explorations completed by these nations during the fifteenth and sixteenth centuries may be gathered from the fact that, from the date of the discovery of America by Columbus, and the exploration of the Portuguese Navigators, Diaz, De Gama, and Magellan, the daring seamen of the Iberian

peninsula brought a New World into existence, and defined the unvisited shores of the Old. Not only were the West Indies and the Spanish Main, together with the whole western coast of America, from California to Cape Horn, explored by the Spaniards, and the seaboard of the Eastern Hemisphere, from Cape Bojador to Macao, traced out by the Portuguese, but these nationalities divide between them the honour of having discovered the greater portion of the islands of the Eastern Archipelago and of Polynesia. Little was left for the navigators of Holland and England to do, though Tasman, Torres, Le Maire, Schouten, Houtman, and others have left their names on the roll of great navigators, and our countrymen, if behind these seamen as discoverers, are pre-eminent as hydrographers. Cook, alone of Englishmen, takes the highest rank for the magnitude of his discoveries and the scientific and thorough methods of his explorations, for whereas all his predecessors were content to sight land and sail away after naming the chief points, he examined the features of the coast-line and delineated them on charts for the use of the world. To the great navigator may be applied the eulogium pronounced by 'Junius' on the first Lord Chatham: 'Recorded honours shall gather round his monument, and thicken over him. It is a solid fabric, and will support the laurels that adorn it.'

Others of our countrymen followed the noble example set by this martyr to geographical science, and among predecessors, Carteret, Wallis, and Dampier specially merit notice, as not mere circumnavigators like Drake, Anson, and Byron. Not that we would appear to depreciate the services of the grand seamen of the heroic

age of Elizabeth and the Georges, who founded and consolidated that empire of the sea which is England's charter of freedom for herself and for those oppressed nationalities whose shores can be reached by the cannon of her ships:

> 'See Britain's Empire! lo! the watery vast
> Wide waves diffusing the cerulean plain.'

England, if behind some European nations in maritime discovery, holds the lead in Arctic exploration. In this department of research, British sailors, from the time when Sir Hugh Willoughby perished in Lapland, have been pre-eminent, though the seamen of Holland and of Scandinavia have run them close in the race for Arctic laurels. But there seems a slackening in this honourable rivalry on our part, and it has been reserved for an American officer—and the greater the credit to him—to trace the footsteps of Franklin's party in their last journey, while our Government have alone declined to participate in the international project for a systematic exploration of the polar area. The nation surely would not grudge the small expenditure necessary for this country to assist in this praiseworthy effort, if not to resume her place in the van of Arctic Exploration.

In a time of peace which, as concerns our navy, has been a prolonged one, some channel should be found for that natural ardour for which war alone can provide an adequate outlet, and, confessedly, the Arctic school is the best for the cultivation of those manly virtues, such as fortitude, devotion to duty, courage, and self-sacrifice, which are the safeguard of nations and

have made England what she is, the mistress of the seas and the possessor of the most widely extended colonial empire the world has known. It is our duty to keep alive the honourable traditions of the British Navy, in which the country takes a special pride, as the model and standard of those of other countries, and that one of our public institutions which the jealous foreigner, even the German, that 'Sir Oracle' of the Continent, cannot teach us how to better. We should not place too much confidence in that 'silver streak' of sea which divides us from nations who have in array millions of armed men, but, as Cymbeline's queen says, trust rather to 'the natural bravery of our isle' than to the accident of its standing

> 'As Neptune's park, ribb'd and paled in
> With rocks unscalable and roaring water;
> With sands that will not bear our enemies' boats
> But suck them up to the topmast.'

C. R. LOW.

KENSINGTON,
April, 1881.

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MARITIME DISCOVERY:

A HISTORY OF NAUTICAL RESEARCH FROM THE EARLIEST TIMES.

CHAPTER I.

The Vessels of the Ancients—Ship-building among the Phœnicians—The Origin of the Sail, Rudder, Anchor, and Cable—Notes on the Attic and Roman Triremes—Ancient Mariners and their Superstitions—The Art of Navigation among the Ancients.

BEFORE entering on the maritime discoveries of the ancients, a survey of the ships and vessels in use among them will be necessary, as the retrospect shows the vast disadvantage under which they laboured in their voyages in comparison with us moderns.

The most rude and elementary of all adaptations of a vessel to float on the water, is the 'catermaran,' or surf-raft, for one person, employed by the Madras native, or the canoe, which is simply a log of wood hollowed out and propelled by a paddle in the direction of the view of the sitter; of such a character is the 'dug-out' of the South Sea Islander, and similar to it was the canoe which Arrian saw at the mouth of the Indus, when the Macedonian seamen thought the natives were digging the water with spades. In an expedition to the

North American coast, made in the year 1603 by Captains Pringe and Brown, of Bristol (See Harris's 'Collections of Voyages,' vol. ii. p. 222), was brought home from the coast of the United States, in 40° north latitude, one of the boats used by the Indians, which is described as , made of the bark of a birch-tree, sewed together with twigs, the seams covered with rosin or turpentine; and though it was seventeen feet long, four broad, and capable of carrying nine persons, it did not weigh sixty pounds.' These canoes were paddled with 'two wooden instruments like to our bakers' peels.'

Scarcely less primitive than the canoe was the coracle of our British forefathers, a basket-like structure covered with hide, such as may still be seen on the Severn; and the very similar 'kufahs,' or round vessels, which were in use on the rivers of Mesopotamia at the time of Herodotus, who describes them, are still employed on the classic waters of the Euphrates and Tigris, the author having frequently employed them in crossing the latter stream at Baghdad. 'The father of history' describes the kufahs as consisting of a framework of willow covered with skins, forming, when complete, a sort of large tub, which was managed by two men with long poles, without any regard to stem or stern. They were of various sizes, and carried an ass besides the merchandise; the animal was employed in conveying the vessel home by land, when taken to pieces, as the downward force of the river's current prevented the kufah from sailing up the stream.

The raft, formed by the lashing together of two or more planks, seems to have been an early, as it is one of the readiest, modes for conveyance on the water. Thus Hannibal used rafts for transporting his horses and elephants across the Rhone. The Egyptians in very

early times used the raft on the Nile. An improvised sort of raft was found in use among the Peruvians at the time of the visit of the Spanish discoverers, tapered at the prow in order to pass through the water more easily, the planks being fastened together with leather thongs. The old timber rafts which floated down the Rhine to Dort in the Netherlands, from the forests of Germany, were oftentimes 1000 feet long, and 80 or 90 feet wide, consisting of trees fastened together with iron spikes and cross timber, a floating island with a village at the top, and requiring nearly 500 labourers to manage it. When the raft was broken up and sold, it sometimes fetched a sum of £30,000. The same method was employed on the coast of Norway, thereby saving the trouble and expense of land-carriage.

On a slight raft, the surf-swimmers of the South Sea Islands swim out to sea through a violent surf, plunging under every breaker, and rising beyond it. In returning, they are carried swiftly on the top of a large wave towards the shore, when they steer among the rocks, taking care to recover their planks.

Superior in contrivance and effect is the construction of the pottery-floats of Egypt. A large number of the jars and various earthen vessels, which are made in great quantities in Upper Egypt, are fastened together with cords and twigs into a triangular shape, having the mouths of the vessels upwards; they are then covered with bulrushes, and the raft is rowed and steered down the Nile to Cairo, where it is taken to pieces, just as is done at the present day in the waters of Babylonia. In ancient times, a vessel was in use on the Nile, made from the planks of acanthus wood, so laid together as to lap over, 'clinker-built,' as we call it, and fastened with

wooden pegs, the seams being tightened with leaves. It was also covered over with flags of the papyrus, and properly cemented, to keep out the water. In process of time an acanthus mast was added, and a spar, on which was bent a sail, formed of papyrus leaves. In ascending the Nile the vessel was towed along; in its descent it was steadied against the effects of the north-east winds by a hurdle of wood from the prow.

The American Indians use wooden-ribbed vessels, covered with skins, which vessels, owing to their lightness, can be carried overland, when it is necessary to avoid the rapids and waterfalls, or traverse the 'portages' between the inland lakes. The Greenlander's canoe is covered in at the top with a skin, so as to be watertight, and encloses the lower part of his body when he is sitting in the vessel, in a manner rendered familiar to us in England by the tiny craft of the Canoe Club. The double canoe of the Society Islands, described by old voyagers, was an ingenious contrivance for affording a safe platform whereon the warriors may wage battle. Two canoes being placed alongside of each other, at a certain distance apart, planks are firmly fixed, across which they make a stage safe from capsising. The whole is so contrived that the rowers may work underneath this floor, while the warriors engage in battle above. The proas of the Ladrone Islands present another form of the canoe, the peculiar quality of which is the great swiftness resulting from their construction. Like the boats in use among the Cingalese, the proas are long and narrow, and have a contrivance on one side, called an outrigger, to preserve a steady balance and prevent their upsetting.

With regard to the form of the vessels employed by

the Phœnicians in ancient times, it seemed that those vessels intended for commercial purposes were without keels, being flat-floored, drawing little water, and of great beam in proportion to their length. Their floor-timbers were continuous, and, with the addition of one futtock only on each side (called by the Greeks 'egcœlia,' meaning the ribs or internal parts of the animal body) the frame was completed. Before the introduction of the keel, the framework of the vessel was formed of timbers bent round, and kept in the curved form by beams passing across, to which the timbers were bolted; but as this was a laborious practice, the keel* was introduced, by which the necessary shape of the frame was more easily ensured. The frame was covered with planking, the planks being fastened to it by large nails, or bolts, formed of wood or iron; in the latter case, those that passed through both plank and timber were clenched at the end. It has been ascertained that the mode of dovetailing, which is now so frequently applied in carpentry, was known in those days, for when the planks were not long enough to reach from stem to stern of the vessel, they were joined end to end, the ends being dovetailed into each other.

The strengthening and improvement of the timbers and other parts of a vessel, assumed greater importance as nations became more involved with each other in warlike operations. Accordingly experiments were made, and experience was appealed to, as to the best kinds of wood for ship-building. The Phœnicians, the Greeks, the Carthaginians, and the Romans, successively directed their thoughts into this channel.

The poet Thomson gives to the cities of Phœnicia,

* The Latin word for keel is 'carina,' from 'curro,' to run, alluding to the mode in which the keel runs or cuts through the water.

Tyre and Sidon, the credit of initiating the navigator's art in the lines :

> 'The ports
> Of old Phœnicia, first for letters famed,
> That paint the voice, and silent speak to sight ;
> Of art's prime source, and guardian ! by fair stars,
> First tempted out into the lonely deep ;
> To whom I first disclosed mechanic arts,
> The winds to conquer, to subdue the waves,
> With all the peaceful power of ruling trade ;
> Earnest of Britain.'

The alder and poplar were used by the ancients for ship-building, as being hard and light woods, but oak and fir were chiefly preferred. The Greeks used chestnut and cedar, the latter of which they considered to be very durable. Cypress was valued for its being water-tight, and elm was chiefly used for the parts of the vessel under water. Sometimes a fleet of ships was formed within a month of the time when the timber spread out its leafy arms in the forest—haste, not skill, being used in their formation. When, however, time allowed, ship-timber was not always hastily felled, nor carelessly employed.

As ship-building advanced in general use and repute, practice and experience introduced certain maxims, some of which were really found necessary, while others were the result of caprice or superstition. Hesiod, for example, informs us that it was deemed improper to fell any timber for the purpose of ship-building, except on the 17th day of the moon's age, because it being then in the wane, the sap or internal moisture, which is the grand cause of early decay, would be considerably lessened. Vegetius extends the time, and allows that if trees be cut down between the 15th and 23rd days of the moon, they will endure for a long time without perishing ; but he

adds that, if that limitation be transgressed, the practice and experience of all artisans shows that the wood becomes worm-eaten and rotten in an incredibly short space of time. Some suppose that the timber felled on the day of the new moon was absolutely incorruptible; they were even attentive to the quarter from whence the wind blew, and to the season of the year—for instance, in the beginning of autumn it was deemed improper to fell timber for ship-building, except the wind was westerly; or in the winter, unless it blew from the north.

The materials with which the planks or other parts of these vessels were fastened together were various. Sometimes wooden bolts were employed, and at other times they were connected together with thongs made from the skins and sinews of animals; iron seldom coming within the reach of the more primitive naval architects. To stop leakage, the ancients used lime and pounded shells, which being observed to waste away, pitch, resin, and wax were employed. Sometimes the crevices were first stopped up with flax, and then leather was employed for sheathing; at a later time sheet-lead was used for the same purpose, and copper nails. For their tools they used flints and shells for cutting, while the bones of certain fishes served them to pierce, saw, and plane with.

Before proceeding further, it will be necessary to give some account of the origin of the component parts of a ship, beginning with the sail. About 1230 years before the Christian era, as far as we are able to discern actual fact through the hazy and fabulous records of antiquity, the adoption of sails promoted the nautical art beyond former conception, and served as an epoch in history. The statements of the early writers of the world, says Charnock, in his 'History of Marine Architec-

ture,' seem to concur in describing Dædalus of Athens, the most skilful mechanician of the day, as the individual who first pressed the wind into the naval service of man.

Writers have tried rather fancifully, as we think, to explain some of the ancient legends found in Lemprière, as denoting attempts to cross the seas by sailing-boats. The bards of the time, whose recitations pleased in proportion to the quantity of the marvellous they contained, recited the legend of the flight of Dædalus from the vengeance of Minos, King of Crete, and the unfortunate death of Icarus, his son. Dædalus, say they, had carefully fitted to his own body, and to that of his son, wings made of feathers and wax. Thus equipped, they took their flight through the air over that part of the sea which lay between Crete and Italy. Icarus, with the rashness and unsteadiness of youth, sought a higher flight than his sire; and, getting too near the sun, the waxen cement of his wings was loosened, which, thus becoming powerless, he fell and was drowned in that part of the Ægean Sea, or Archipelago, which bore for ages after the appellation of the Icarian Sea.

The fact of the passage of one of these persons from Crete to Italy, and the drowning of the other, is undisputed, also that they went over the water and not over the land. Balloons being at that time unknown, it is supposed that boats were employed, and Dædalus and Icarus, cutting their way through the waters with sails swelled out by the wind, seemed to have flown over it with wings. According to this theory, the vessel of Icarus, who seems not to have had his sail sufficiently under control, was capsised, and thus, as truly said in the fable, 'he dropped into the sea and was drowned.'

Many other voyages, under circumstances novel for the times, have received the utmost embellishment of

the poetic art. When we consider the surprise of savage races at beholding ships, like floating castles, with expanded wings, making their unassisted way over the sea, we discern easily whence arose the fiction of the flight of Perseus to the Gorgons, who, we are told by Aristophanes, was carried in a ship. The story of Triptolemus, who was feign to ride about the world on a winged dragon, doing good to the human race, receives a fanciful explanation in his having been employed by his countrymen to procure corn in a ship from foreign shores, for the supply of their necessities. The winged horse, Pegasus, is described as a ship of that name, fabled to have been the offspring of Neptune, the god of the sea. In a word, it is thus sought to account for the stories of ships transformed into fishes and birds, so frequently met with in the ancient poets.

By some the idea of a sail has been referred to the nautilus, or sailor-fish, which is seen in the Mediterranean Sea, the Indian Ocean, and the Polynesian waters of the Pacific. It is oftentimes observed in calm weather, floating on the surface of the water, using its side fins as oars, its hinder one for steering, while its dorsal fin serves as a sail, which is 'shortened,' in nautical phraseology, when it is desirous of sinking.

> 'Sailing away in his ancient shell;
> He has no need of a compass like us,
> Foul or fair weather he manages well.'

Again, Byron speaks in some picturesque lines of

> 'The tender nautilus, who steers his prow,
> The seaborn sailor of his shell canoe,
> The ocean Mab, the fairy of the sea.'

The material of which the sail was composed varied according to the produce of the country. Hercules is said to have used the skin of a lion, which was his

garment; and Julius Cæsar observed that the Gallic Veneti employed leather. In other countries they used sails made from twisted flax or hemp. We do not find more than one sail or one mast used in the vessels of the earliest ages, which moreover were without a deck. The sails were commonly white, which was esteemed lucky, though sometimes they were of other colours, and the vessels were painted red and sometimes blue. When we read of the 'black' ships of Homer, it must be understood that they had this appearance from the pitch with which they were externally covered to exclude the water. Sometimes other materials were used to produce the same effect, and hence a diversity in the colours of the ships which conveyed the allied army to the plains of Troy.

The size and number of the sails increased with the magnitude of the vessels and the length of their voyages, all which depended on the importance of the nation, which, in the progress of time, by the adventurous searching spirit of commerce, or the desire of conquest, advanced the maritime art. The form and disposition of the sails in the vessels have been found to be different in various countries. We are told that, in ancient Egypt, the sail was suspended on two upright poles, so that it could be used only before the wind, as is the case among some of the South Sea Islanders, whose sails are made of matting.

It seems that the original rudder was nothing more than one of the oars or paddles held sternwise by the person in the boat, with which natural observation and practice taught him to steer the vessel. This method is even now in common use. The ancient Greeks, we are told by Homer, used only one rudder, but as their vessels enlarged in size, they used two, one at the prow

and the other at the stern, connected therewith by fastenings termed rudder-bands (alluded to in the voyage of St. Paul), so that these were called double-stern ships, and could be propelled either way without turning, a practice now in vogue in river steamers. Tacitus relates that the Germans used vessels of this sort. The object of the rudder-bands was to fasten the helm up out of the water, when the ship was left to drive, or take its own course. We read of four rudders being employed, but nothing definite seems to be known of ships of this sort; nor of ships which are mentioned as having two prows and two sterns.

In ancient times we do not hear of anchors, the vessels being galleys, which were sometimes made so that they could be conveniently carried overland, when so doing would tend to lessen distance. For this purpose, they were oftentimes constructed so that they could be easily taken to pieces. They were also drawn up out of the water, even for a single night, and hence it is clear that the anchor was not needed.

The Tuscans are said to have invented the anchor, while some ascribe it to Midas, whose anchor was long preserved in one of the temples of Jupiter. But whatever means may have been originated by any party to stay their vessels on the water, though the effect obtained was always the same, the instrument was various. The most ancient anchors were large stones bored through the middle, and sometimes they were made of wood having lead inserted. In some places, baskets of stones, or sacks of sand, suspended by cords in the sea, served as anchors, by impeding the course of the ship by their weight. At length the anchor was made of iron, with one fluke, and soon after, two-fluked anchors became general, and sometimes they employed an anchor with four flukes.

The ancients generally used more anchors than one, and dropped them from the stern by a boat which was usually towed along after the ship. Of the several anchors belonging to each ship, one exceeded the rest in size and strength. This was called the sacred anchor, and was used only in extreme danger; so that the phrase, to throw out the sacred anchor, was in process of time proverbially applied to those who were driven to the last shifts. In modern times the principal anchor is called the 'sheet anchor,' the others being the two 'bower' anchors, suspended from the ship's bows for ordinary use, and the smaller 'stream' and 'kedge' anchors.

We find occasional mention made of iron chains for dropping the anchor. Cables, however, were generally employed, made from leather thongs, or the sinews of animals; and, at a later time, of flax, hemp, rushes, or seaweed.

Greece was the mother alike of the arts of peace and war, and improved the science of navigation, which is also so greatly indebted to the Phœnicians, and to the Arabs of a later date.

> 'O Greece! thou sapient nurse of finer arts!
> Which to bright science blooming fancy bore;
> Be this thy praise, that thou, and thou alone,
> In these hast led the way, in these excell'd,
> Crown'd with the laurel of assenting Time.'

The ancient Greeks procured from Egypt, ropes and cables manufactured from rushes and sea-willow. It seems to have been the ordinary practice of the ancients, to place at the head or prow of the vessel, an image, called the sign, which we see also in modern times. This gave then, and usually gives now, a notion of the ship's name. The sides of the prow were called cheeks,*

* The cheeks, or cheek-knees, in modern ships, are pieces of timber on the ship's bows for the security of the beak-head, or knee of the head.

as this part of the vessel generally showed a human face called Parasemon. What we know as the 'cut-water,' was called the goose, a fancied similarity being detected between the ship and this bird while on the water. At the stern, often carved into the form of a shield, and elaborately painted, were small streamers. Here also was set, or in some way delineated, a representation of the deity to whose tutelary favour the ship was committed; to this deity daily prayers and sacrifice were offered, and here was the naval sanctuary.

Ancient vessels were universally named after some beast, bird, or fish, and were often termed horses among the ancients. In the legend of Neptune and Minerva contending for the honourable guardianship of the city of Athens, the horse which the former gave, was a symbol of maritime affairs; as the olive, given by the latter, was of agricultural peace and quiet. Though the victory was at the time adjudged to Minerva (called Pallas Athenæ), the goddess was an early patroness of navigation. We are told that the poorer people of Gades, now Cadiz, a Phœnician colony in the south of Spain, called their small barks, horses. The Gemini were the patrons of the mariner, and were deemed to be present with mortals when a sacred light played around the tops of the masts, which is now known as St. Elmo's fire, and is due to electricity, which, as every schoolboy knows, is attracted by points.

Many of the signs of the Zodiac, and other constellations, received their names from the ships of early days, which the admiration of the times resolved to honour with immortal remembrance by a belief in their translation to the skies. It was customary in ancient times, says a writer, to give an appellation to a vessel, according to the place from whence it started, or the purpose to

which it was intended to be applied. Thus, Phaselus a small yacht, or pleasure vessel, was named, in all probability, from Phaselis, a town in Pamphylia, belonging to the Cilicians, where such boats were much in use; Cydarus, a vessel peculiar to a river in Thrace of the same name; Parones, which were small vessels built on the Parian Islands, in the Ægean Sea, the inhabitants of which were much accustomed to use those vessels; Myoparones, nearly of the same description with those last mentioned, and acquiring their title from the same cause, with the addition of the term Myon, a city in Epirus, where the use of them was much adopted.

Cicero states the name of Cybea was applied to a large vessel built for the purposes of merchandise, and so called from the word *cibus*, meaning meat or food. The term Gaulus was applied to vessels nearly round, somewhat resembling the present jolly-boat, which term was probably derived from the same Latin word, which signifies a milk-pail; the term Corbitæ was applied to the wicker-work vessels Cæsar saw when he invaded Britain—the word *corbis* signifying a wicker-basket. Caudicæ was a term applied to rafts, and was derived from *caudex*, the stump or body of a tree; Hippagines, from *hippos*, a horse, denoted vessels employed for the transportation of cavalry or horses; Pontones, from which is derived the word pontoon, was the term applied to such vessels as were adapted to the passage of rivers. Many others might be enumerated.

In the reign of Ptolemy Philopater, King of Egypt, according to Athenæus, a galley of forty tiers of oars, so it was said, was constructed, each tier containing one hundred rowers. This ship carried, moreover, its complement of sailors and soldiers, and was called the *Isis*. Snelling, in his description of this galley, says: 'The

oars, which were near the stern of the vessel, were considerably longer than those in the midships, the largest being thirty-eight cubits or about fifty-seven feet in length; they were rendered more manageable by a quantity of lead attached to the handle.' Some people have attempted to solve the problem by supposing the oars of ancient galleys were disposed in diagonal rows, so that the seats of the rowers resembled a flight of stairs, but it would be impracticable to work them thus. Others again have sought the solution of the enigma by the suggestion that the term bireme, trireme, octoreme, and so on, denoted the number of men employed at each oar; but this cannot be reconciled by the descriptions always given of the ancient galleys; 'Remorum ordines et remigum gradus,' which cannot allude to the numbers employed at each oar. Charnock has the most reasonable explanation that the numbers referred to the tiers of oars in different parts of the ships; thus 'the octoreme had two tiers of oars amidships and three at the stem and stern, making in the whole eight.' At the same time it is certain from ancient sculptures that galleys were built with three tiers of oars, though there is no proof of more. A not less wonderful vessel than the *Isis* was constructed about the same time, by Archimedes, at the command of Hiero, King of Syracuse, as a gift for Ptolemy. This ship had in it banqueting-rooms, galleries, stables, baths, and fish-ponds, and also a temple of Venus, the floors and sides of which were painted with scenes from the Iliad of Homer. There seems to have been a rage at this time for constructing these huge machines, which the deficient nautical skill of the times could not apply to any useful purpose. They resembled floating islands, and, indeed, we are told that these, and such like fabrics, were too unwieldy

for use, and served merely for show and ostentation.

In an interesting lecture on the galleys of the Greeks and Romans, delivered by the Rev. E. Warre before the members of the Royal United Service Institution in April, 1876, much light was thrown on the vexed question of the trireme. According to the lecturer, the first who, after the revival of letters, undertook a treatise 'De Re Navali,' describing these galleys, was the Chevalier de Baif, Ambassador at Venice of the French King Francis I. Once introduced, the subject, owing to its interesting character and obvious perplexities, became a favourite with the learned, and we find many great writers of the seventeenth century descanting upon the theme, including our own Sir Henry Saville, Provost of Eton, the great Scaliger, Scheffer of Upsala, Meibom of Amsterdam, and Isaac Vossius. During the last century Scheffer's treatise, 'De Re Militari Navali,' remained the best text-book on the subject. Montfaucon, in his 'L'Antiquité expliquée,' gives some illustrations of ancient galleys from the column of Trajan and the church of San Lorenzo; but with this exception, there is nothing noteworthy concerning them in the last century, except the attempt of a countryman of our own, General Mellvill, who caused, in the year 1773, a model of a quinquereme to be erected against a high wall behind his house in Pulteney Street, in which, we are told, he 'performed the motions of rowing with some officers of both the land and sea service, and all agreed, as well as one of his Majesty's chief ship-builders, who had come to inspect it, that such and no other must have been the construction of the ancient galleys.' In the present century, Mr. John Howell, about the year 1826, constructed a trireme for

the Edinburgh Society of Antiquaries, and of late years the subject has been handled with ability by Mr. Smith, of Jordan Hill, and by M. Jal, the author of the 'Glossaire Nautique,' and of two volumes on 'Archéologie Navale.' In accordance with his ideas, Napoleon III. directed the construction of a trireme under the superintendence of the eminent naval architect, M. Dupuy de Lôme. The honour, says Mr. Warre, of having solved many, if not most of the difficulties which have perplexed so many eminent men, must be given to the illustrious German scholar, Boeckh, and his pupil, Dr. Graser, who, in an exhaustive treatise, 'De Re Navali,' has elucidated satisfactorily the most knotty points of this ancient problem. The discovery at Athens, in the year 1834, of a number of inscriptions which proved to be inventories of galleys and their gear, belonging to the dockyard at the Piræus, dating from a period not long subsequent to the close of the Peloponnesian War, was an event of the utmost importance when elucidated by the critical acumen and vast learning of the author of the 'Public Economy of Athens,' and of his learned pupil, Graser, which have shed a flood of light upon the whole question of the construction of ancient ships of war.

In the early galleys, any increase in the number of oars necessitated an increase in the length of the ship, and hence arose the invention of tiers of oars, which, as far as we know, were not double-banked until Roman times. The single-banked galleys carried twenty, thirty, fifty, and up to a hundred oars each, in which the usual space between the rowers' benches of two cubits, affords a conjectural ground for estimating their length. These are all embraced under the term of 'moneres,' or 'monocrota,' as striking the water with one beat. The first

improvement upon this was the construction of the bireme, which, according to Pliny, is due to the Erythræans. The biremes gave place to triremes in the seventh century before Christ, and ultimately survived them, and in the seventh century after Christ were in use when such a thing as a trireme was hardly to be seen. In like manner they in turn disappeared, while their predecessors, the monocrota, survived.

We are told by Thucydides that the Corinthians were the first who built triremes in Greece, and further, that an eminent naval constructor of Corinth, Aminocles by name, did not confine his skill to the limits of his own country, but built four of these new ships-of-war for the Samians, of which event he fixes the date at about 300 years before the end of the Peloponnesian War, or about 700 B.C. Their skill as seamen saved the Greeks from the domination of the Persians—who, from their inland training, never developed nautical capabilities—quite as much as the heroism of the soldiers who died in the unequal struggle for independence.

> 'Clime of the unforgotten brave!
> Whose land, from plain to mountain cave,
> Was freedom's home, or glory's grave.'

Two classes of vessels, says Graser, appear to have been employed by the Grecians, distinguished by the names of 'aphract,' unfenced, and 'cataphract,' fenced, according as the rowers of the upper tier were protected or exposed. Both classes were decked and floored, but the 'aphract' class carried their decks and flooring lower than the 'cataphract,' so that in them the rowers of the upper tier were visible above the side of the vessel, as appears in the bireme and trireme, given by Montfaucon from the Column of Trajan. The aphract ships had their flooring one foot below the water-line, and the

deck five feet above it. The battle of Actium, the Trafalgar of ancient times, which caused the ruin of Antony's cause, was won by the use of the light Liburnian biremes, which were 'aphract;' and after that event the Romans seem to have built most of their vessels in that fashion. Previous to that date, from the time of the invention of this system, all the larger vessels of war used by both Greeks and Romans were cataphract.

In the cataphract trireme, the space allowed for each oarsman was, says Graser, eight square feet per man, and this proportion was observed in the larger vessels up to the octireme. The seat itself was from nine to twelve inches broad. The lowest rank used the shortest oars, and the difference of the length of the oar in-board was provided for by the outward curvature of the ship's side. The oar-ports were vertically one foot three inches below the handle of the oar when the blade was just touching the water. The lowest (*thalamos*) oar-ports were three feet above the water; the middle (*zugos*) oar-ports were four and a quarter, and the upper (*thranos*) five and a half feet above the water. The vertical distance between the oar-ports was but fifteen inches, and each oar-port was protected by the 'ascoma,' or leather bag, which fitted close over the oar, closing the aperture without impeding the action of the oar. The seats of the rowers were supported on benches, three feet long or thereabouts, which ran from the ship's side to beams four feet apart, which rose from the floor and reached up to the under surface of the deck. The space on either side between the 'diaphragmata,' as the beams were called, constituted that part of the vessel in which stood the masts, and in which stowage was possible. It was in the Attic trireme seven feet wide.

The longest oars in the trireme (thranite) varied from

thirteen feet six inches to fourteen feet three inches in length; the zygite oars were ten and a half feet, and the thalamite seven and a half feet. In the case of the gigantic oars of the 'tesseraconteres' of Ptolemy, a vessel of the size of the *Agincourt*, Snelling informs us that the handles were weighted with lead, so as to bring the oar in-board and out-board nearly to an equilibrium, but in ordinary cases, the proportion was one-third in-board to two-thirds out-board. In the cataphract class, the floor was one foot above the water-line; below this was the hold, which contained a certain amount of ballast, and through the floor into the hold, the buckets for baling were worked. Ten inches above the heads of the thranitic oarsmen were placed the cross-beams which supported the fighting deck, which was thus a clear three feet above the gangway, which projected eighteen inches from the side of the vessel, allowing the soldiers free play for their javelins over the heads of the seamen in the 'parodus,' or space occupied by the rowers, beyond which forward was a space of eleven feet, and fourteen feet abaft.

At the bow and stern, towers, especially in the Roman vessels, were often erected, which gave a vantage height from which to shower down missiles on an enemy's deck. In very early times we find the elevated forecastle, on either side of which was figured the eye of the vessel, and in the centre an aperture which served as a hawse-hole. At the stern was a raised quarter-deck, on which was a kind of cabin, or deck-house, forming a shelter for the chief officer and helmsman. This quarter-deck was the sacred part of the ship, where was kept the image of the patron god; and behind the deck-house rose the flagstaff on which was hoisted the pennant, the red flag which was the signal for going into action, and such signals as were required.

On either side of the bows, 'catheads' projected, and between them and in front of the stem were two beams, one above the other at some distance apart, shod generally with metal fashioned as the head of a ram or some other animal. Underneath was the rostrum or beak, which was a long spur, and at a later period was usually divided into three teeth.*

The Romans, having defeated the Carthaginians in several naval encounters, carried home as prizes the beaks of the enemy's ships which they had captured. These they hung up in the Forum, about the tribune from whence the public orators harangued the citizens. This pulpit was, therefore, called the rostrum, which is the Latin for beak. Hence a person about to speak publicly is said to mount the rostrum.

The trireme was steered by two paddles or rudders, one on either side of the stern of the vessel, to the tillers of which, under the deck, was attached a rope, which passing through a block on either side and over two wheels on the quarter-deck, enabled the helmsman to turn the two rudders which way he pleased by a single effort. In the mid space stood the main-mast, which

* The total length of the trireme, according to Graser (exclusive of the beak for which we must add nearly ten feet), was 149 feet, of which 124 feet were occupied by the rowers. The greatest breadth at the water-line was fourteen feet above, at the broadest part of the beam eighteen feet, and, with the gangways added, twenty-one feet. The height of the deck in cataphract ships above water was eleven feet. The draught eight and a half feet. Total height nineteen and a half feet, thus leaving ten and a half feet for the hold. The height of the aphract trireme from water to the top of the gunwale is calculated at eight feet. The capacity of the cataphract trireme, calculated according to the modern formula of measurement, gives 232½ tons. As all the Attic triremes appear to have been built on one and the same model their gear was interchangeable, an arrangement which, in a fleet of from 300 to 400 vessels, offered great facilities in refitting.

was square rigged, and before and abaft it, the two 'acati,' fore-mast and mizzen-mast, which carried lateen sails—though in action the ancients did not use sails. The regular crew of an Attic trireme probably consisted, according to Mr. Warre, of 225 persons in all. Of these, 174 were employed in rowing, disposed as follows—fifty-four thalamitæ, fifty-eight zygitæ, sixty-two thranitæ, the upper oars being the most numerous, as the contraction of the vessel near the bow and towards the stern afforded less space for the lower tiers. Besides the rowers, there was a force of ten soldiers and twenty seamen; the number of the former seems to have varied greatly, and depended much on the style of fighting preferred, for where, as in the case of the Athenians, speed and dexterity in the use of the ram were the chief tactical features, but few were employed. Xerxes' great fleet carried thirty to each trireme.

Of the officers, the chief was the trierarch, or captain, and next to him the master, who was responsible for the steering and sailing of the vessel. Each tier of rowers on either side had its chief, and there were also the boatswain, the 'keleustes,' who gave the time to the rowers, a steward, a purser, and the ship's piper.

The principles of construction in the larger vessels, the quadriremes, quinqueremes, etc., were exactly the same as in the trireme, the additional tiers being added by carrying the 'diaphragmata' upwards, and, at the same regular intervals, inserting the thwarts on which the rowers' seats rested. The increase in size of Greek vessels began after the Peloponnesian War, and seems to have culminated in the time of Demetrius Poliorcetes, who manœuvred with vessels of sixteen banks of oars, and we hear of nearly every number of banks of oars up to that figure. The huge 'tesseraconteres' of Ptolemy

Philopater, with its forty banks of oars, was in reality a costly toy, and of no practical use. A minute and curious description is given by Graser of this great ship. The Romans, who copied a quinquereme which fell into their hands in the first Punic War, appear to have used vessels chiefly of that class, but their defeat by the light Liburnian biremes prepared the way for the disappearance of the great banked galleys.

Regarding the question of the speed of these vessels, there is a passage in Xenophon ('Anabasis' vi. 42), in which it is stated that the distance from Byzantium to Heraclea, in Bithynia, about 150 nautical miles, could be rowed in a day by a trireme. Now, allowing eighteen hours' daylight for the work, a speed would have to be maintained of over eight knots. Long and careful training had perfected the system of rowing and steering among the Athenians, who for many years held the sovereignty of the Ægean Sea. It was their want of training and effeminacy, not their numerical inferiority —353 sail against 600,—that caused the Ionians to be disastrously defeated by the Persians at the battle fought off the shore of the Island of Lade, now a hill in the flat marshy plain of the Mæander, in the year 494 B.C., four years before Marathon. The Athenians excelled in naval tactics as in art and arms, and Xenophon tells us that everyone knew how to handle an oar, and that the crew of a trireme could be got together with ease at once. That wonderful nationality excelled in arts as in arms—

> 'Where every power benign
> Conspired to blend the power of human-kind,
> And lavish'd all that genius can inspire.'

In his 'Hellenics' (book vi.) Xenophon gives a graphic account of the stern training to which the crews were subjected by Iphicrates, the Athenian admiral.

Their subsequent defeat was due to a mistake in ship-building, for their vessels were built for speed, to which every other consideration was sacrificed. The result was fatal to the maritime ascendency of Athens, when, in the year 415 B.C., their fleet encountered that of Syracuse. On that memorable occasion the Athenian navy, led by the veterans Lamachus and Nicias, numbered 100 triremes, carrying a vast army, and manned by 17,000 seamen, but it suffered defeat when the sharp bows of its ships were found of no avail to ram the stronger built and heavier vessels of the Syracusan and Corinthian ship-builders, the prows of which were constructed much thicker and more solid, and the catheads made of heavy balks of timber, supported by wooden stays nine feet in length, which broke up the forecastle and upper works of the Athenian triremes. In their extremity, the seamen of Athens strove to capture the enemy's galleys by boarding, for which purpose they used an 'iron hand,' or grappling-iron, attached to a chain. Against this danger the Syracusans provided, by covering their decks with greased hides, so that the grappling-irons slipped off without gaining a hold. The struggle ended in one of the greatest disasters known in the annals of war, and not even the desperate courage of Demosthenes, who arrived with reinforcements, could retrieve the day, when all was lost save honour.

According to Pliny, the invention of the ram, or beak, was due to one Piseus, a Tuscan pirate chief, though the Greek poets, subsequent to Homer, speak of the war-vessels as armed, in Trojan times, with brazen prows, and in a fragment of Æschylus, Nestor's ship is called a ten-beaked or ten-spurred ship. It would appear that the 'brazen beak' was used in the earliest naval battle on record. Diodorus says that 'Semiramis, when she

reached the Indus, found the King's fleet prepared for battle, put her soldiers on board her own flotilla, attacked him, and after a desperate struggle, in which nigh a thousand vessels were sunk, won the victory;' and Suidas says that 'Semiramis had constructed in Bactria 3000 vessels of war with brazen beaks, the crews for which were furnished from Syria, Phœnicia, Egypt, Cyprus, and Cilicia.'

That the Egyptians possessed a fleet and navigated the Mediterranean and Red Seas at a very early period is tolerably certain, even if the statement made by the priests to Herodotus (book ii. 102), concerning Sethi or Sethosis, that he navigated the Erythræan Sea, or Indian Ocean, in a fleet of ships of war, be fabulous. The legends of Danäus and Ægyptus connect Egyptian maritime enterprise with Greece, and in a remarkable passage Euripides calls the ropes of the Greek vessels, the 'twisted teaching of Egypt.' The earliest representations of Phœnician vessels that we have, says Mr. Warre, in his lecture already quoted, are of a much later date than those on Egyptian monuments, and are in most respects similar to the early Greek types, which probably were borrowed from them. In these, both on coins and vases, we have the projecting beam for a beak, and a nearly straight bow and forecastle rising above it.

Passing to the Romans as a naval power, it was not till the Carthaginian fleet, ravaging the coast of Italy, brought home to them the real conditions of the contest upon which they had entered, that they turned their attention to maritime affairs. Hitherto the conquest of Italy had occupied their thoughts, but the first Punic War was the commencement of a struggle for the empire of the ancient world, in which Rome conquered.

'Where'er thy legions camp'd,
Stern sons of conquest, still is known
By many a grassy mound, by many a sculptur'd stone.'

The Roman fleet consisted of only a few triremes, which could not be opposed to the Carthaginian quinqueremes, vessels of five banks of oars; but by chance, in the year 260 B.C., one of the Carthaginian vessels of this rate was driven ashore and captured by the Romans. With the practical sagacity and unswerving energy of purpose which distinguished them, they determined to construct a fleet upon this model. The timber was felled, the shipwrights set to work, and, within two months of the time when the trees were standing in the woods, a fleet of a hundred vessels, each 168 feet long and of 534 tons measurement, had been constructed. Meanwhile the future crews were practised on framework set up on the land, and in the motion of rowing to the voice of the 'keleustes.' When all was nearly ready, the admiral, Cn. Cornelius, set sail in advance with seventeen ships, but within a few days was captured by the Carthaginians. Meanwhile the rest of the fleet was under way, but the ships were badly built, and terribly slow.

Some ingenious spirit suggested to Duillius, who now assumed command, the construction of a novel engine of warfare, destined to counteract the rams of the enemy. This contrivance, called the 'raven' (corvus), is described by Polybius as being attached by a pulley to the top of the mast, twenty-four feet high, fitted at the prow of each vessel. It consisted of a long ladder-shaped construction, with planks nailed across it, four feet wide and thirty-six feet long, having a balustrade about the height of a man's knee running the whole length of each side, with an iron claw fastened at the end, which Polybius

compares to the knocker of a door, sharpened to a point. On the top was a ring to which was attached a rope by which, as a ship came up for the purpose of ramming, aided by the pulley on the top of the mast, the ladder was let fall on to the deck of the enemy's ship, when its weight drove the sharp iron spike into the planks, and so bound the two vessels together. Then the soldiers, of whom a quinquereme carried 120, in addition to 300 sailors and rowers, if the vessel was prow to prow, rushed two abreast over the bridge; and if alongside, boarded from all parts together.

The two fleets met at Mylæ, the modern Melazzo, not far from the Straits of Messina, and the result proved the excellence of the new invention. The Carthaginians advanced with a fleet of 130 vessels, full of confidence in themselves and contempt for the crews which had learned to row on dry land; but when the advanced squadron of thirty ships charged, they were almost immediately grappled, boarded, and taken, including the admiral's flag-ship. After a short conflict, the remainder of the fleet, terrified at this novel engine, turned and fled, with a loss of about fifty ships, 3000 killed and 7000 prisoners. This victory was the presage of doom to Carthage and the prelude of maritime dominion to Rome. The ram henceforth, though still formidable, had no longer the first place as a weapon of attack. Duillius still enjoys well-merited renown, and has had his name revived in an Italian ironclad carrying two of Sir W. Armstrong's 100-ton guns. Of the other weapons of offence used in naval warfare, the most important was the 'dolphin,' a heavy mass of metal used for the purpose of sinking an enemy's ship. It was hoisted by means of the yard-arm, which was swung round over the enemy when he came to close quarters, and suddenly let fall upon his deck.

The graphic account given by Cæsar, of the fight of his fleet with the Veneti on the coast of Gaul, introduces us to the Falces, great spars with curved steel heads like a reaper's sickle, with which the cordage of the barbarians was cut, and their vessels, which were too unwieldy for rowing, thus rendered helpless. In later days we have also the counterpart of modern artillery, the siphons, from which the terrible 'Greek fire' was launched, rocket-fashion, against the enemy. Some of these seem to have been of a very large calibre, others again small enough to be carried by a single man; and the Greek fire contained in these projectiles is supposed to be crude petroleum, which, to prove the truth of the saying, 'there is nothing new under the sun,' it may be mentioned it is now proposed to adopt in conjunction with the torpedo-boats, so as to clear the decks of a ship before launching the torpedo.

There were also the Roman 'turres,' towers, erected at the bow and stern, whence the heavy 'pilum,' or javelin, could be cast on the enemy's deck.

Graser compares the Attic fleet of the year 330 B.C. with the Russian fleet in the Crimea in the year 1854. The tonnage of this he gives at 72,000 tons; the Attic fleet consisting of 411 vessels, he computes at 98,085 tons. During the next five years the Attic fleet had been increased to 103,577 tons measurement. The present tonnage of the British navy is about 300,000 tons, that of the French about 200,000 tons, in round numbers. The fleet of Xerxes, which we are assured on good authority consisted of 1207 triremes, must have been, upon Graser's basis, 280,627 tons measurement. The great fleet of the Romans at the battle of Ecnomus, consisting of 364 quinqueremes, represents shipping to the extent of 193,376 tons. Still more remarkable was

the numerical strength of the crews employed in these fleets. The crews of Xerxes' fleet, all told, are estimated at upwards of 340,000 men. The Attic navy at the time of Demosthenes required upwards of 90,000 men for its service, and the Roman fleets in the first Punic War carried nearly 120,000 men.

While the war-galleys of the Romans were of small breadth as compared with their length, the proportion in trading-vessels was about one to four. They were also flat-bottomed with small draft of water, somewhat resembling the Chinese junk. As the war-ship carried a helmet on its mast, and a banner at its bow, so a basket emblematic of its nature was suspended from the mast of the trading-vessel. The common burden of their trading-vessels seems to have been fifty or sixty tons, though much larger ones are alluded to; and an obelisk of 1500 tons was brought in them from Egypt to Rome, and placed by Constantine in the Circus, where it now stands. The same vessels which were called Ætnas, or moving mountains, carried, we are told, more than 1100 tons of pulse.

We know little of the conveniences the mariners of ancient times had for sleeping in their ships. Ulysses, we read in Homer, slept on skins at the stern, and the rowers, who in the course of time were selected from slaves or malefactors, reposed upon the benches where they had toiled. Any superior accommodation was deemed effeminate; and Alcibiades the Athenian commander, Plutarch tells us, was censured for having on board a hammock or bed hung upon cords.

The invariable time for sailing was that of summer, when the heavens were genial, and the length of the day far exceeded the darkness of the night. Even with a smooth sea, and fair wind, they did not for ages venture

out of sight of the land, lest, apparently, in the boundless waste of waters, they might be drifted about for ever; their voyages, therefore, to which they were tempted by trade and commerce, were a continual coasting, and vessels were in certain circumstances even towed along. As the poet says:

> 'Still in the crook of shore, the coward sail
> Till now low crept; and peddling commerce ply'd
> Between near joining lands.'

To the maritime natives of antiquity, and the Portuguese in the Eastern world and the Spaniard in the West, after the heroic Ferrarese seaman had brought a new world into existence, belongs the credit of having first dared to launch out into the untraversed wastes haunted with a nameless terror to the mediæval mariner. Having regard to the discoveries of Columbus, De Gama, and other navigators of the fifteenth and sixteenth centuries, the poet Thomson was hardly justified when he claimed for his countrymen that they first dared the perils of the deep sea in his noble lines:

> 'For Britons, chief,
> It was reserved, with star-directed prow,
> To dare the middle deep, and drive assured
> To distant nations through the pathless main.
> Chief, for their fearless hearts the glory waits,
> Long months from land, while the black stormy night
> Around them rages, on the groaning mast
> With unshook knee to know their giddy way;
> To sing, unquell'd, amid the lashing wave;
> To laugh at danger.'

Superstitious fears seem to have haunted sailors from the earliest to the present time. It was an article of belief among the ancients, that a soul which had departed from a body unhonoured with the rites of sepulture, was condemned to wander in sorrow for a hundred

years on the banks of the infernal river Styx, ere it could be admitted to the resting-place of bliss. Being, therefore, in their coasting voyages at the mercy of the people, and impatient at the close confinement and restriction of the ship, having also a religious dread of the unfathomable and stormy deep, it is not surprising that ages upon ages should pass away, and the shores of the Mediterranean, the first civilised portion of the West, (which, as its name implies, seemed to them to be the middle of the earth), remained the only navigable sea.

When a voyage was contemplated, the ships, which had in all probability been hauled up on dry land, were pushed into the sea by the shoulders of the mariners, or by levers; or latterly, by means of a rolling machine called a helix, invented by Archimedes, about 200 years B.C.

The ships of India, were, we are told, launched by means of elephants. It is related that one of these animals being directed to force a very large vessel into the water, found the task exceed his strength; whereupon his master, in a severe tone, ordered the keeper to take away the lazy beast and bring forward another; the poor animal, upon this, instantly renewed his efforts, and, in so doing, fractured his skull and died upon the spot. It is a remarkable commentary on the want of progressiveness of civilisation in Hindostan, that, nearly 2000 years after the above was written, this method of launching vessels by the assistance of elephants was still adopted by native ship-builders. Hyder Ally, the ruler of the Carnatic, with whom and his son Tippoo Sultan we had a life-and-death struggle in the latter half of the last century, founded dockyards at Onore and Bangalore, on the West Coast of India, and a visitor to Onore in December 1775, describing two ships of war

of twenty-two and twenty-four guns in course of construction at that port, says: 'Instead of the head or stern fronting the river, their broadsides do; they are built with their sides parallel to the banks. On my asking how they launched them, I was told that when ready, they laid long, straight timbers squared, which reached from the ship's bottom to the water. Then they take away the supports from the side next the river, and the ship resting on those timbers, which are greased, by the force of elephants, first at one end, and then at the other, alternately, is pushed into the river.'

In ancient times when a fleet of merchant-ships was about to sail, every proceeding connected therewith became matter of religious ceremony. Sacrifices had to be performed, each ship committed to the care of some deity, and omens and prognostics to be observed like the *Aves alites* of Roman augury. Thus the perching of a swallow on the mast, or the sneezing of any person to the left, would so perturb the minds of the sailors as to delay the departure till the following day. When, however, nothing had occurred to alter their resolution, the ships were unmoored and departed with oars or sails, or perhaps both, decked with flowers and garlands, and attended with prayers to Neptune and the other gods, from the voyagers and their friends remaining at home. Having made a good offing, doves were let loose from the ships, which, flying back to land, were hailed as omens of the safe return of the crew. The ship of the commander usually led, conspicuous for its gaudy ornaments; the others followed in order, and, when fairly out at sea, sailed three or more abreast if the weather permitted. Excepting under very favourable circumstances, they anchored throughout the night in some

sheltered spot, or drew up their ships on the beach, so that all hands might repose until the returning dawn. If they actually lost sight of land, it was with the view of directing their course to some headland, which they knew lay in a certain direction. In the progress of ages, as the knowledge of astronomy advanced, and various observations of the heavenly bodies were made and collected, the situations and bearings of places were noted by these means.

Though it appears that the general principles of the loadstone were well known many ages before the Christian era, yet the polarity of a suspended needle was never dreamed of among the maritime nations on the western side of the ancient hemisphere, until within the last five hundred years—although the first missionaries to China found that the compass had long been in use in that country among the inhabitants, whose early advance in civilisation is as remarkable as their unprogressiveness.

As the 'ancient mariner' could only look to the heavens for assistance, and they, oftentimes, in the midst of his greatest difficulties, were obscured, it was natural that he should cling to the coast. But in process of time, in addition to the motions of the sun and moon, it had been observed that certain stars towards the north never sank below the horizon, but seemed to move continually round a definite point. The ancient Greeks noticed the constant revolution of the seven conspicuous stars, forming the hinder part of the Great Bear ; and it appears that the commercial Phœnicians had already more closely tracked up the northern point of the sky by directing their attention to a set of stars which kept on revolving in smaller circles than those observed by the Greeks. This was the constellation called the Little Bear ; at the tip of the tail of which is situated a star, now called the

Pole Star. This is the nearest plainly visible star to that point which is in a line with the pole of the earth, infinitely extended northward. When the use of these observations had been made familiar by practice, the nautical art advanced considerably, and various schemes of enterprise were formed, and effected with more or less success.

The chief officers of the trading-ships of the ancients were the master of the rowers, and the pilot. It was the business of the former to attend to the rowers, to encourage them in their labours, and to keep time to the motion of the oars, by the strokes of his mallet, or the musical intonations of his voice. To the pilot, or master of the ship, belonged the duty of navigating the vessel, for the safety of which, and all on board, he was consequently responsible. His place was at the stern, and to excel in his vocation he had to be proficient not only in the art of seamanship, but to have a knowledge of the winds, of the heavenly bodies, as indicating the seasons, of portending the weather, directing the course of the ship and of the coast-line and harbours.

The ancients remained in port during the winter, and until the indications of spring invited them to sea again. It was not usual, therefore, for them to prosecute their voyages long after the autumnal equinox, the gales which then prevailed in the Mediterranean, formerly called euroclydons (an east wind), but now Levanters, being hazardous to shipping. It was also required of the pilot to understand and explain the signs which offered themselves from the sea-birds, the fishes, and the billows dashing upon the shores, for a seaman unapt in the solution of any portent of this sort, could not attain to the reputation of a good pilot. Wonderful things were expected of that notable pilot, Palinurus,

and we are told of another great mariner, Ulysses, that having procured a bag of wind, he was returning home to Ithaca with a prosperous sail, when having fallen asleep just as his native isle was in sight, the bag was opened by the sailors, who suspected that treasure was concealed in it, when the winds rushed forth with awful violence, and drove the ship backward a distance of ten days' sail.

The flight of birds has been from the earliest times regarded as conclusive of the direction in which a ship's course should be set, and as late as the ninth century of the Christian era, we find Danish and Icelandic mariners placing their trust in this singular omen. It certainly speaks much for the intrepidity of these hardy seamen, that, without compass or quadrant, or the assistance of astronomical tables and almanacs, they should have ventured to launch their crazy barks on the stormy seas that wash the shores of Northern Europe, and for days and weeks together, trust their lives on the boundless expanse of sea, guided by the flight of birds, and the chance of seeing sun and stars.

Jonas, an Icelandic historian, tells us the way in which the flight of birds was made to act as a guide to the mariner. He says that when Flok, a celebrated Norwegian navigator, was about to set out from Shetland to Iceland, he took on board some crows, because the mariner's compass was not yet in use. When he thought he had made a considerable part of his way, he threw up one of his crows, which, seeing land astern flew to it ; whence Flok, concluding that he was nearer to Shetland than to any other land, kept on his course for some time, and then sent out another crow, which seeing no land at all, returned to the vessel. At last, having run the greater part of his way, another crow was sent out

by him, which seeing land ahead immediately flew towards it, and Flok, following his guide, fell in with the east end of the island. Such was the simple mode of keeping their reckoning and steering their course, practised by these bold navigators of the stormy Northern Ocean.

The notion of lighthouses to guide mariners seems to have been generally adopted about the time of the Christian era, from the Egyptians. The small island of Pharos, in the Bay of Alexandria, had been joined to the continent by a causeway of a mile in length, about 284 B.C., and at the extremity of this mole, was built a white marble tower, one hundred and thirty-five feet high, on the top of which fires were constantly maintained for the direction of ships upon the coast. The expense of this tower was some 800 Alexandrian talents, or about £330,000 English. The tower was accounted one of the seven wonders of the world. The architect, Sostratus, was ordered to inscribe on it, 'King Ptolemy, to the gods, the saviours, for the benefit of sailors;' but, wishing to claim all the glory, he engraved his own name on the solid marble, which he covered with cement, on which he formed Ptolemy's inscription. When the cement had decayed by time, Ptolemy's name disappeared; and the following inscription then became visible: —'Sostratus the Cnidian, son of Dexiphanes, to the gods, the saviours, for the benefit of sailors.' Dexiphanes was he who made the causeway, mentioned above. We have accounts of various structures of this nature, erected at most of the harbours and naval stations where the larger-sized ships rode at anchor, secure from the swell of the seas around.

CHAPTER II.

Varieties of Craft in use in Ancient Babylonia—Sea-going Vessels in the Persian Gulf—Chinese Junks and other Craft—Navigation among the Celestials—The Vessels of the Ladrone Islanders and Peruvians.

To trace in detail the successive steps by which the primitive constructions employed on rivers and seas, developed into the wonderful marine structures in use in the present age, would require a volume in itself. But, strange as it may seem, we may, even at the present day, see almost in juxtaposition the rafts and boats employed in prehistoric times and the triumphs of the ship-builders' art of the nineteenth century. At the head of the Persian Gulf, where the war-ships of her Majesty steam in undisputed sovereignty, there flows a river, on whose bosom still float vessels which have existed in their present state from the earliest dawn of history.

The best and most detailed account of the various descriptions of craft in use in Mesopotamia, may be found in the pages of the late General Chesney's 'Expedition for the Survey of the Rivers Euphrates and Tigris, 1835-37.' Anything relating to this country is of special interest, for not only is it commonly regarded as the cradle of the human race, but within its confines are the sites of those cities of prehistoric times, Babel, Accad, Erech and Nipur (the Calneh of Genesis), all built by the mighty hunter 'Nimrod' (identified by Assyriolo-

gists with the Izdubar of Babylonian tablets), who lived 2250 B.C. In Mesopotamia arose, flourished, and decayed the Chaldeans, whose city Arioch (Ur of the Chaldees) was the site of the most ancient literature; also the ancient races who founded the kingdoms of Babylonia and Assyria; here ruled Ninus and his more famous Queen, Semiramis, and the monarchs whose edicts were supreme from the confines of Egypt and the island of Cyprus to the borders of China.

No records of navigation would be complete without some notice of the vessels in use among the races who founded the most ancient civilisations known to man. In Mesopotamia, the cradle of the human race, are found numerous specimens of the vessels used in navigation, from the hollowed-out tree on which the pre-historic man may be supposed first to have floated. The use of a simple log is very common among the people on the Upper Euphrates, by whom not only single trees, but also rafts of timber, are frequently floated to their place of destination. A better description of raft is prepared, of any required size, by lashing a number of hurdles together; and such means of transport are in use along the Euphrates and Tigris, but more frequently on the latter river. In places where reeds abound they are substituted for timber, and, in a surprisingly short space of time, a raft is prepared suitable for transporting individuals and their baggage across a river, the animals swimming by the side. The usual method of passing rivers is, however, by means of inflated skins of sheep and goats, on which the Arabs, male and female, fearlessly cross, or descend to a considerable distance along the great streams of Mesopotamia, for agricultural and other purposes, taking everything they possess, and even bowls of milk are carried in this way.

In a country like Mesopotamia, a great desideratum is pasture for the cattle, and this is procured by the people causing the buffaloes and other animals to cross from one bank of the river to the other in the morning, returning in the afternoon in the same manner. This operation is generally accomplished without any other precaution than that of the shepherd accompanying the animals on an inflated skin, carrying his clothes, and a small supply of bread, upon his head. Two inflated goat-skins, attached to one another by means of a couple of hoops, form the next step in navigating these rivers; this custom prevails also in Central Asia, with this difference: that larger skins, such as those of oxen, asses, or horses, are substituted for those of the goat or the sheep; and with these, says Wendover, they pass rivers and other waters without loss.* Four such skins being attached by means of withes of willow, or tamarisk, there is placed over them a kind of platform, consisting of branches in layers, at right angles to one another, and reaching from side to side. This constitutes the smallest kind of 'kellek,' on one of which may be seen an Arab family moving with the stream from one pasture-ground to another, carrying its bags of corn and other effects. For commercial purposes, or when proceeding to a greater distance than is required in changing pasture-grounds, a larger construction of this kind is substituted, which, like the preceding, is extremely simple, and is described by Chesney† and by Layard in his work on his explorations in Nineveh.

A rectangular or a square platform, having a sort of well or inlet at one extremity, is first constructed,

* 'Voyage of Wendover,' 1239. See Purchas's 'Pilgrimes,' vol. iii. p. 62.

† See the late General Chesney's 'Expedition for the Survey of the Euphrates and Tigris, 1835-37.'

by means of successive layers of branches, crossing at right angles, till the whole has become sufficiently stable, which is usually the case when the flooring is eighteen inches or two feet deep. On this platform there is a fireplace or hearth, within a little enclosure of damp clay to prevent accidents. Rough planks are then laid over the rest of the space, which is occupied by the boatmen and merchandise; the necessary buoyancy being obtained by attaching in parallel rows a number of inflated goat or sheepskins to the bottom of the platform. These skins are refilled with air, from time to time, by means of a reed pipe, an operation which can be performed at pleasure, since most of the skins can be reached at the sides, and by means of the inlet alluded to, which is left in the body of the raft for this purpose. The ordinary kellek, or raft, is from sixteen to eighteen feet long by fourteen or sixteen broad, and is supported by about thirty-two or thirty-four skins, but the larger ones are thirty or forty feet in length, and have at least fifty skins, and those used to transport merchandise from Mosul to Baghdad, have as many as 300 skins. The rafts are generally kept mid-stream during the voyage by means of two rude oars made of the rough branches of trees, a palm branch fan at the end of each forming the blade. When the cargo has reached its destination, the materials composing the raft are sold for firewood, and the skins are taken back by land for future use.

This description of raft was in use on the waters of the Upper Indus, and may still be seen on the Kabul River, and Chesney is of opinion that this was the kind of raft used by the Gerrhæans, who transported the chief part of their articles of commerce, including some of the spices of Arabia, from their capital into Babylonia, and

onward to Thapsacus, to be carried from thence to other places by land. Rafts were also used for commercial transport from Armenia to Babylon, the frame being of wood, which was usually overlaid with reeds, and the bottom covered with skins.

From the 'Anabasis,' whose classic purity of diction the poet extols—

> 'Xenophon's pure strain,
> Like the clear brook that steals along the vale'—

it appears that the Greeks crossed the Euphrates opposite Carmandæ on rafts made with the skins of their tents, stuffed with rushes and tightly sewn together; and a part of Jovian's army crossed the Tigris on a raft made of the inflated skins of sheep, oxen and goats, covered with a floor of earth and fascines. At a later period the troops of Nadir Shah crossed the latter river by means of a very large raft, on which 2500 men were transported the first day, and 15,000 on the second, after which the raft fell to pieces. This float was formed by large beams of palm-tree wood fastened together with cables, and rendered more buoyant by having a number of camel's skins tied to it, these being sewed up and filled with air. Pietro della Valle speaks of rafts transporting goods to the value of 100,000 dollars, and that which carried Tavernier had merchandise of 33,000 pounds, Paris weight, in addition to thirty persons, for whose accommodation a kind of shed was constructed on the raft.

A remarkable description of boat is constructed at Tekrit, and in the marshes of Lamlum, but more commonly near the bituminous fountains of Hit, on the Euphrates. At these places the operation of boat-building is conducted with no other tools than a few axes and saws, with the addition of a large metallic ladle to pour out the melted pitch, and a wooden roller to assist in

smoothing it. The first step, says Chesney, in this primitive mode of ship-building, is to choose a level piece of ground of suitable size, and sufficiently near the edge of the water; on this the builders trace out the size of the vessel's bottom, not with mathematical precision, it is true, but still a line is used, and a certain system followed, the floor of the boat being the first object. In the space marked out a number of rough branches are placed in parallel lines, at about a foot distance, and other branches are placed crosswise at similar distances, and interlaced. These, with the addition of a sort of basket-work of reeds and straw, to fill up the interstices, form a kind of rough platform, across which, to give the necessary stability, stronger branches are laid transversely from side to side at distances of about eight or twelve inches. The sides are constructed by driving through the edge of the floor upright posts, about a foot apart, of the requisite height; these are filled up in the same way, and the whole is strengthened by means of rough pieces of timber, which are placed at intervals of about four feet from gunwale to gunwale. All parts are then coated with hot bitumen, which is melted in a hole close to the work, and reduced to a proper consistency by a mixture of sand or earth. This bituminous cement being spread over the framework, the application of a roller gives the whole a smooth surface, both within and without, which after a brief space becomes not only quite hard and durable, but impervious to water, and well suited for navigation. The usual shape of the boats thus constructed at Hit, roughly resembles that of a coffin, the broadest end representing the bow. Such a boat, forty-four feet long, eleven feet six inches broad, and four feet deep, drawing one foot ten inches of water when laden, and only six inches when empty, can

be constructed at Hit in the course of one day, and is employed to carry bitumen, salt, and lime to Hillah, Bussorah, and even to Baghdad during the early part of the present century when navigation was feasible through the Saklawiyah and Hai Canals. When arrived at its destination, the boat is broken up, and the bitumen with which it was coated, as well as the cargo, is sold.

Round boats, similar to those mentioned by Herodotus, still float on the rivers Euphrates and Tigris. The 'Father of History' describes them as being round, like a shield, without any distinction of stem or stern, constructed of willow, lined within with straw or rushes, and covered without with leather. They were of various sizes, and some were even capable of carrying a cargo of the weight of 5000 talents, equal to about 164 tons. They were managed by two men standing up, one of whom propelled an oar, whilst the other drew one back, much as bargemen do now on the Thames. The smallest-sized boat had an ass on board, and the largest several, which were used to carry back to Armenia the skins with which the boats were covered, all the other materials having been sold at Babylon. The ordinary freight carried from Armenia and other countries on the route from thence to Babylon was, says Herodotus, palm wine in earthen jars.

The 'kufah,' or basket-boat, is still used on the Tigris and Lower Euphrates; but they are in more general use at Baghdad, and form a convenient and safe method of crossing that broad and rapid stream. They are constructed of osiers plaited together, precisely like baskets, over a circular frame of stout materials. In some instances the basket-work is covered with leather, which is stretched over it after being soaked, and whilst still in a wet state, so that, when dry, the vessel becomes

water-tight. But the common method is to cover the bottom with bitumen, which, being smooth as well as hard, effectually excludes the water, and is more easily and cheaply procured. The smallest-sized kufah is about three feet eight inches in diameter, and about two feet six inches deep. This vessel is managed by one man, who uses a large-bladed paddle alternately on each side. There are other kufahs, however, varying in size up to ten feet diameter, with a depth of three to three and a half feet, but some are fifteen feet from gunwale to gunwale, and are capable of carrying a camel, with several passengers in addition, though none of those in use in the present day would carry such a cargo as that mentioned by Herodotus. A boat of this shape is scarcely more difficult to construct than a raft, and possesses a decided advantage over all other vessels when crossing a rapid current, though, on the other hand, it has a proportionate disadvantage when going against the tide; in descending the river, a bundle of hurdles is attached, which floats in advance, and a stone drags along the bottom to guide them.

These circular boats were in use not only in Egypt, whither, doubtless, the art of constructing them was carried from Babylonia, but are recognised in the coracle, still to be seen on the upper waters of the Severn, which is covered with skins sewed together, and so lightly framed that no coast was too shallow, no river too small for them, and, if danger pressed, says Sharon Turner, in his 'History of the Anglo-Saxons,' their owners carried them on their shoulders from one river to another. It was by the aid of these simple vessels, the predecessors of the mighty fleets that swarm on every sea, that the Ancient Britons sought to stem the tide of invasion when, as Thomson says, Rome—

'Saw'st thy Cæsar, from the naked land,
Whose only fort was British hearts, repell'd,
To seek Pharsalian wreaths. Witness the toil,
The blood of ages, bootless to secure,
Beneath an empire's yoke, a stubborn isle,
Disputed hard, and never quite subdued.']

Two of the greatest commanders of ancient and modern times alike employed these circular boats. Arrian (chap. xx.) speaks of the floats of hides constructed by Alexander, and in the 'Duke of Wellington's Despatches' (edited by Colonel Gurwood, vol. i. p. 136) there is an order addressed to Colonel Munroe, to prepare some of them for the Malpoorba River, in India.*

In the Lamlum marshes, on the Lower Euphrates, are also used canoes, made of reeds and covered with bitumen. The stem and stern of the boat being alike, she moves both ways with equal facility, and is propelled either by one man sitting towards the stern, or in the case of larger canoes, by one at each extremity, facing the direction in which the boat is proceeding. At Koornah and Bussorah, the natives use a canoe called a 'bellem,' of a more substantial construction, formed out of a single tree, commonly beech. The usual dimensions

* The following is the Duke of Wellington's despatch:

'CAMP AT HATTIARY, FIFTY MILES FROM MERITCH,
'*April 8th*, 1803.

'MY DEAR MUNROE,

'As it is possible that the service on which I am employed may last after the rivers will fill, it is necessary that I should make arrangements for having boats upon all of them; I have accordingly written to Purneah and to Mr. Read to have some prepared in Mysore, and in Loondah; and I must request you to have twenty basket-boats made in the ceded districts. They should be the size of ten feet diameter, and three feet deep, and I wish that they may be covered with double leather. The leather ought to be sewn with thongs, and of such a size as to cover the gunwales of the boats all round. I intend that your boats shall be on the Malpoorba.'

of these bellems are from eighteen to twenty-five feet long by eighteen to twenty-two inches deep, and from two feet to two and a half feet broad almost throughout the whole length. The boat is generally managed by one man sitting as far aft, and as low as possible, using his paddle alternately on each side; though sometimes a second uses a paddle at the bow. At Bussorah, where these canoes ply for hire, a light awning of striped cotton, with a movable curtain on the sunny side, shades the boatmen as well as the passengers. The canoe will accommodate four or even five persons without inconvenience, and is both swift and comfortable; but owing to the round and narrow bottom, a slight movement is sufficient to capsize it.

Between Hit and Anah on the Euphrates, as well as to some distance above the latter town, there is used a roughly-built wooden boat, which is tracked upward by hand, and returns with the current. These boats are flat-bottomed and partly wall-sided, but sharp at the extremities, where they rise abruptly several feet higher than amidships. By this arrangement the track line is sufficiently high to pass brushwood and other ordinary obstacles, whilst more command is given to the helmsman, who stands on the platform at the other extremity steering by means of a very long crooked pole, which terminates with a fan or blade, to increase its power. These boats are 'carvel-built,' of roughly-sawn planks of the beech and other trees growing in that part of the country, and being very liable to leak, a coating of bitumen is sometimes added to make them watertight. They are principally of two sizes, the larger of which is rather more than forty feet long by fourteen feet beam, and the smaller thirty-three feet long, thirteen feet two inches broad, and three feet six inches deep amidships.

They are chiefly used in transporting bulky articles upwards, such as wool, grain, sheep, lime, etc., their return cargoes being timber, or brushwood and charcoal for fuel, and they are decked only at the extremities.

Besides the round boat, which is so admirably suited for the purpose, another description, varying according to local circumstances, serves for the passage of rivers. The ferry-boat of the river Aras, described by Chesney, is a mere box open at one end, and rudely constructed. It is about twenty-two feet long by thirteen and a half feet broad, and three feet deep. A platform, consisting of rough pieces of timber extending the whole length, and strongly planked across, forms the bottom of the boat, on which the three sides are raised, by means of uprights, planked in the same way. The boat is poled across the stream, except when the water is too deep, when oars are used. Those used at Bir for the passage of the caravans are of the same rough build as the former, but they are wider and rather shorter, with an open stern, having a movable platform attached, which enables the camels and horses to walk on board with ease. These boats will transport six of the former or eight of the latter animals. Their usual dimensions are from thirty-five to forty feet long, and from twelve to fourteen feet broad at the stern, which breadth continues almost to the bow. The latter portion approaches the shape of a wedge, and is covered with an elevated platform or forecastle, about five feet in length, on which stands the *nakeedah*, or helmsman, who uses a long curved pole having a blade or fan at its extremity, which is so placed as to form a lever against the stream; the current does the rest, for by tracking the boat up the stream to a sufficient distance, after the camels are embarked, a pas-

sage is ensured to the proper landing-place on the opposite side. The workmanship, which is of rough planking, overlapped, and fastened either by nails or wooden pegs, sufficiently indicates that there has been little change, and perhaps no improvement for ages in the construction of these boats.

In the lower waters of the Euphrates, Tigris, and Shat-ul-Arab, a kind of vessel is used for conveying cargoes of dates, which combines the advantages of sails and oars. They are of various sizes, from five tons to nearly seventy tons burthen, and have a sharp raking bow and a full and heavy stern, with a raised poop, for the accommodation of the crew, the rest of the space being left for the cargo. In general, the rig is the same, consisting of one mast nearly amidships, raking forward, and spreading an immense lateen-shaped sail, which extends from stem to stern. The length of such a boat is ninety feet, and breadth twenty feet, with a draught of water of seven feet three inches, and the vessel carries about seventy tons of cargo.

The sea-going vessels in use among the Arabs are as varied as the river boats. They include 'trankies,' impelled by both oars and sails, which, though formerly much employed in the Persian Gulf, are, we believe, not to be seen now. The 'Batil' is a vessel with a long fiddle-headed bow and two masts, which may be distinguished from other craft by the inner part of the stern-post being ornamented with devices cut in the wood. The Batil of the southern part of the Malabar coast, is about fifty to sixty feet in length, sixteen to eighteen feet in breadth, and eight to ten feet in depth, and has more of the European form than any of the Indian-built vessels that are met with. The after-part shows the origin to be of Portuguese construction, as it

is very similar to that of many of the boats still in use by the people of that country; indeed they are said to be of the same shape as the vessel in which Vasco de Gama sailed to India. They have a deck fore and aft, and are built in a very rough manner; little or no iron is used in putting the timbers together, its place being supplied with coir string,* and vessels thus constructed, besides being exceedingly pliant and elastic, possess many sailing advantages over those fastened entirely with nails and bolts. Contrary to the European mode of boat-building, they tie the planks together before the ribs are fastened in, which is the last and concluding part of the process. Occasionally they are found fastened with nails and bolts. They are equipped with one mast which inclines forward, and a square lugsail with one pair of shrouds and a backstay; also a small bow-sprit at an angle of about 45°, with a sort of jib-foresail.

The bagarah of the Persian Gulf is similar to the batil, with one mast and a small deck-house abaft. The baghalah, or buggalow, is a species of native vessel which it is the fashion to call a 'dhow,' though dhows are, at the present day, never seen in the Gulf, or indeed rarely anywhere, only a few being found at Jiddah and some other ports.

The baghalah is of great size, sometimes of 200 or 300 tons burthen, and carrying several guns—one called the *Duniyah*, belonging to the Sultan of Bahrein, had ten. The Persian Gulf baghalahs have two masts raking forward like those of the batil and bagarah, and a high

* This practice is extremely ancient, as well as that of paying the seams with bees'-wax. During Arrian's expeditions one of the vessels was wrecked, but the sails and rigging were preserved. Having secured these, the sailors next proceeded to scrape off the wax, which Arrian and other writers represent as one of the most necessary articles in fitting out ships.

poop with stern-ports, and a long pointed bow. The baghalah is steered with an ordinary tiller, unlike the batil and bagarah, which are steered by yoke-lines leading from a point a little above the water on the outside edge of the rudder. The baghalah of the Gulf of Cutch is one of the most ancient vessels to be met with.

Mr. Edye, formerly master shipwright of the Dockyard at Trincomali, describes these vessels minutely in a paper communicated to the 'Journal of the Royal Asiatic Society.' Their extreme length, from stem to taffrail, is about seventy-four feet, the breadth twenty-five feet, and the depth in hold eleven feet six inches, and they are about 150 tons burthen. The peculiarity of form and extraordinary equipment of these vessels is said to have been the same from the period of Alexander the Great. They are armed with two guns on the after-part, and have their poop-decks with a round stern. Their extreme section is abaft the waist or middle of the vessel; they are very broad in proportion to their length, with a sharp rising floor, the stern is straight, and rakes very little more than the stern-post. These vessels are constructed with timbers and planks which are 'nail and trenail fastened' in the most rude and unsafe manner possible. The topside above the deck is barricaded with mats on the outside of the timbers, which run up to about eight feet from the deck; and when they have no cargo on board, this barricade is removed. They have only one mast, and a lateen-sail, the tack of which goes to the stem-head as in all other vessels. The extraordinary longevity of these native vessels may be gathered from the fact that in 1837 a baghalah, the *Deria Dowlut*, or 'Wealth of the Seas,' which was built at Bownuggur in the year 1750, was still trading in the Red Sea.

The Arab dhow is a vessel generally of about 150 to 250 tons burthen by measurement, and sometimes larger. It is 'grab-built,'* with ten or twelve ports, about eighty-five feet long from stem to stern, twenty feet nine inches broad, and eleven feet six inches deep. These vessels have a great rise of floor, are calculated for sailing with small cargoes, and are fully prepared, by internal equipment, for defence, with decks, hatchways, ports, and poop-deck, like a vessel of war. Many of them are sheathed on two-and-a-half-inch plank bottoms with one-inch board, and the preparation of chunam, cocoanut oil, and domar (country resin), which is called 'galgal,' put between the planks and sheathing-board, causes the vessel to be very dry and durable, and prevents the worm from attacking the bottom. The worm is as great an enemy to timber in the water as the white ant is to it on land. On the outside of the sheathing-board there is a coat of chunam or whitewash, made the same as that between the sheathing and the planks, and this coat is renewed every season they put to sea. These vessels, though often brig-rigged, when formerly used for war purposes by the Joasmi and other piratical tribes, had, generally, only one mast and a lateen-sail. The yard is the length of the vessel, and we have seen a dhow having a spar of 100 feet in length; the mast rakes forward, for the purpose of keeping the ponderous weight clear, in raising and lowering. The tack of the sail is brought to the stem-head, and the sheets aft in the usual way; the halliards lead to the taffrail, having a pendant and treble-purchase block, which becomes the

* The 'grabs' were vessels rigged like English brigs and barques, but built with the fore-part projecting out of the water like a canoe, instead of a straight stem, which caused them to pitch violently in a seaway.

backstay, to support the mast when the sail is set ; this, with two or three pairs of shrouds, completes the rigging, the whole being of coir rope. Dhows may be distinguished from baghalahs by a long gallery projecting from the stern, which is their peculiar characteristic.

The pattamars are a class of vessel which may be considered the best sailers in India, and the most useful as stowing a good cargo. They belong principally to Bombay merchants, and carry on the whole of the coasting trade to that port. They are grab-built, and the dimensions of the large class are seventy-six feet six inches in length, twenty-one feet six inches in breadth, eleven feet nine inches in depth, and about 200 tons burthen. They are planked, says Mr. Edye, with teak, upon jungle-wood frames, and are really very handsome vessels, being put together, in the European manner, with nails, bolts, etc., and their bottoms are sheathed with inch-board, and have the preparation before described. Some of the smaller class of these vessels, of about sixty tons burthen, are sewed together with coir like other native boats. The small class have one, and the large class two masts, with the lateen-sail, the fore-mast raking forward for the purpose of keeping the ponderous yard clear. The yard is slung at one-third of its length ; the tack of the sail is brought to the stem-head through a fixed block, and the sheet hauled aft at the side as usual. The halliard is a pendant and treble block from the mast-head aft to midships ; thus acting as a backstay for the mast's security, together with about two pairs of shrouds.

A boat peculiar to the Indus, and described in the 'Journal of the Royal Geographical Society' (vol. iii. p. 355), by that enterprising traveller, the late Sir Alexander Burnes—who fell a victim to Afghan treachery at Cabul on the 2nd November, 1841—is the *dundi*, which

is well adapted for the navigation of the river and the transport of goods. The shape is peculiar, being without a keel, flat-bottomed, and both the bow and stern, which are perfectly flat, rise from the water at an angle of about 30°, to suit the shelving banks of the river. It is rigged with a square-sail aft, and a lateen-sail forward, and is steered by means of a large triangular rudder, hung over the slanting stern; the largest are eighty feet long, and carry sixty tons, drawing only four feet of water.

For want of better materials, says Captain Carless, of the late Indian Navy, the boats of the Indus are formed of innumerable small pieces of wood, fastened by bamboo pegs, and they are consequently liable to accidents; but any great deviation from the principle of their construction would not be an improvement. Between Bukkur and Mittun, the boat most in use, called a zohrny, is built of the talee tree, of an oblong square shape, flat-bottomed, and rounded at the extremities. Some exceed eighty feet in length and twenty in width, with only one mast. Ever since the time of Alexander, this great stream and its tributaries have been navigated by the above kind of flat boat, in one of which Burnes ascended at the favourable season to Lahore, a distance of nearly 950 miles in sixty days, and which was also used by Lieutenant Wood, of the Indian navy, the discoverer of the sources of the Oxus.

'Unchangeable as the East' is an axiom that may be applied to the ships and navigation of the Chinese, whose types of vessels have been as ancient and immutable as their civilisation; as specimens of the craft employed by the earliest navigators they claim brief notice here.

That the Chinese carried on commercial intercourse with Europe from the earliest historic times, we have ample records to prove ; and recently a singular piece of corroborative evidence has been afforded, though Professor Sayce, Mr. Robert Douglas of the British Museum, and other Chinese scholars, ridicule the so-called discovery. The *Norddeutsche Zeitung* says that the Chinese Ambassador at Berlin, Li Fangpao, well-known in his own country as a great scholar, has lately read as Chinese the inscription on a vase found by Dr. Schliemann in the lowest stratum of his excavations at Hissarlik, and figured on p. 50 of the introduction to his 'Troy and its Remains.' The learned Ambassador has thus confirmed the identification of the language of the inscription made six years ago by the eminent Orientalist, Émile Burnouf, which was greatly ridiculed at the time. Li Fangpao is quite confident that the unknown characters, which recur again and again on the Trojan antiquities, especially on the terra-cotta whorls, are those of his native tongue, and gives as the purport of the inscription, that about B.C. 1200 three pieces of linen gauze were packed in the vase for inspection. Burnouf's French version also contained the words 'pièces d'étoffes.' 'This vase,' adds the *Norddeutsche Zeitung*, 'seems consequently to furnish a fresh proof of the active commercial intercourse which the people of the "Hyperboreans," the Chinese, carried on with Greece and Asia Minor.' The English Chinese scholars, however, above-mentioned, aver that the similitude between the Trojan and Chinese characters is only accidental, and not very apparent.

Of whatever size the boat may be, says Chesney (whose accuracy of description we can certify from service in Chinese waters), the part immersed is invariably spoon-

shaped, and almost without a keel. In the larger description the rudder is triced up when necessary, by a winch, into a recess left for the purpose between the parts of the double stern-post; but when in its place it is entirely below the body of the boat, clear of the dead water, and gives the principal lateral resistance when under sail. The boats are carvel-built, but the planks are connected by nails, which being counter-sunk into one of the planks, are drawn into the other, the seams and spaces being caulked with a composition which is fairly water-tight. The cabin is aft, the cookhouse forward, and a capacious water-tank is placed on each side of the keel of the mainmast; the whole deck is formed of flying hatches, which are fitted over groved carlines, so as to prevent the flow of water below. Ordinary oars, or sweeps of great power, are employed when the vessel is not using her sails. These last present little variety, being almost invariably a kind of lugsails, of matting, which are admirably suited for work. In general, there are only two masts, which work upon a pin the height of the deck, and are kept in their places by a fid at the keel. On each mast there is a mat-sail with several bamboo stretchers across it, and these have spans passing round the mast, so formed as to give the sail full play, and at the same time to prevent its flying away. The sheets are attached to the end of each stretcher, having spars similar to 'bowline bridles' fitted to them, in order to keep the sail taut. The sails are reefed by settling the halliards and allowing the sail to roll into its place between two tricing lines, one before, and the other abaft the mast.

The 'tanka,' or egg-boat, also known to those who have been in China, where it is so generally used by the natives in harbour, as a 'sampan,' is of a wide, short,

and flat construction, and is propelled by means of an oar and scull, the former, which is placed forward, being pulled with a grummet on a thole, while the latter, which is aft, works upon a pivot on the taffrail; this pivot enters a socket of hard wood, which is let into the scull, and the extremity of the latter is hooked to a short line attached to the deck, so as to permit it to move from side to side, in order to give additional power to the man or, as is more frequently the case, to the woman, who sculls, assisted occasionally by a mat-sail at the bow.

These boats accommodate a family, who are protected from sun and rain by a tilt-shaped sliding cover of bamboo, which covers a part or the whole of the boat at pleasure. The cooking-place and utensils are in the after-part of the boat.

There is also a light kind of wherry, from twenty to twenty-five feet long, having two mat lugsails, which are either rowed in the ordinary manner or sail, and are not only swift but handy. The fishing-boats, generally about twenty tons, are stronger and more heavily built, but of the same rig, and go in pairs under sail, using a net between them. The crews possess perfect command over these boats, and keep pace with each other as to speed and distance so completely, that a large trawl or drift-net is dragged along as evenly as if it were done by hand. There are, besides, various descriptions of cargo-boats, some of large size, having a pair of shears resting on the sides instead of a mast, in order that the hold may be free for chests of tea. Lines of boats, moored in parallel rows, present as animated a scene as the streets of a town, and when the author was at Canton some twenty-five years ago, there was a vast population, probably not less than 60,000 people, living entirely on the water, with floating eating-houses, gambling-houses,

and joss temples. The Mandarins have also their gorgeously-fitted-up 'flower-boat,' having suitable accommodation for water-parties; and which, when moving up the river, is propelled by one large sweep, and sometimes by two at the stern, thus leaving the rest of the vessel free for the use of company. The ordinary sea-going cargo-boat is of nearly the same rig as the fishing-boat; having two large lugsails of matting, with a smaller one at the stern. Between the fishing-boat and the large heavy junk there are various intermediate-sized vessels.

The war-boat is very long; and, having a great many sweeps on each side, with a numerous crew, she is exceedingly fast. The armament usually consists of two guns in the stern, and a pivot-gun in the bow, with six jinjals on each side, which are made to load at the breach, besides a quantity of spears, swords, shields, stink-pots, and other combustibles to throw on board on emergency. They have three lugsails, but in calm weather depend entirely upon their sweeps for speed. Of these there are usually from twelve to fifteen on each side, manned by two, and frequently three, men each. A plank, well secured by means of an iron hook, projects about two feet beyond the side of the vessel, in the extremity of which the sweep works on an iron pivot placed at about one-fifth of the length of the sweep, which is attached to the deck by a short line. One man stands on the board to assist the other, and, as in the case of the 'sampan' or 'tanka,' they move the sweep backwards and forwards, so as to give to its blade an undulating motion nearly parallel to the side of the boat. Nothing approaching to a ship or brig is to be found in China, where the vessels of burthen are confined to the far-famed junks, which are of large size, and in many respects well suited for trade.

A huge eye, painted at each side, very similar to the eye of Osiris painted on ancient Egyptian vessels, distinguishes the bow of the junk, while the stern is still more clumsy. Entering at the waist or midships, a hatchway leads from the deck into the hold, which is divided into compartments for different kinds of cargo. In the bow under the forecastle there is an open apartment with small cabins at the side. Aft, an open staircase leads into a large cabin, above which there is another apartment under the poop, and again another above, in which the helmsman is placed; and either here or immediately below, there is the joss-house, containing gaudy idols and lights burning, with a small cabin on each side. The length of these junks sometimes exceed 170 feet, and the beam between thirty-five and forty feet, and occasionally they are capable of carrying a bulk of 500 tons.

When we bear in mind that the Chinese in ancient times, and even as late as the thirteenth century, when Marco Polo describes their ships, traded as far as India and the port of Siraf in the Persian Gulf, it is certain that the art of navigation has retrograded among this singular people, for at the present day they limit their voyages to Java and the adjacent countries, though a generation ago the strange sight was seen of a Chinese junk in the Thames. It is true that under the more enlightened government of the present rulers of the Celestial empire, taught by the bitter experience of wars waged with this country, they have sought to develop a navy consisting of ships constructed on European principles; but as regards their mercantile marine, they are as conservative, in the worst sense, as possible, and there can be no improvement or development of commerce while they entertain their unconquerable prejudice against

altering the construction of their clumsy and unseaworthy junks. The open stern to admit the rudder is an element of danger in the event of the vessel making sternway; the sails of matting, though they have their advantages, are unhandy; the flat bottom almost without keel causes them to fall to leeward; the anchors are clumsy implements made of a hard and heavy wood called *teik-mo* (or iron wood); while in lieu of pitch they caulk with a putty composed of burnt gypsum and oil, mixed sometimes with bamboo shavings to supply the place of oakum.

In their voyages the Chinese adopt the course of the ancients, who steered from headland to headland, and they also refer to a rough sort of directory in which are noted the harbours, shoals, currents, and other particulars, while the courses are denoted by the figures on the circumference of their compass, steering by the aid of which, without any chart, they judge of the distances by the last promontory or island in sight, a practice in which long experience makes them very expert.

Mr. Gutzlaff, author of the 'History of China,' who was interpreter to Captain Elliot, R.N., Chief Superintendent of British trade in 1840, was passenger in one of these junks from Siam to the north of China, and has given a very full and interesting account of the voyage, as well as of the management and internal economy of a Chinese trading-vessel. Besides perpetual offerings to an image of the 'Queen of Heaven,' they worship the compass itself. This is covered with a stripe of red cloth, some of which is also tied to the rudder and cable, the next object of consequence to the sailors. Incense sticks are burnt, and gilt paper, made into the form of a junk, is kindled before it. The compass likewise constitutes head-quarters. Near it, some tobacco, a pipe, and a burning lamp are placed, and here the crew adjourn to

enjoy themselves. In a dead calm, a quantity of gilt paper shaped like a junk is set adrift, and offerings made to the goddess and sundry demons; but if all this proves ineffectual, the offerings cease, and they await the result in patience. The account which Mr. Gutzlaff gives of the manning and discipline of these trading-junks serves to explain in part the loss of so many at sea, when combined with the other imperfections attendant on their construction and management. Besides the principal owner of the cargo, or agent for those who own it, there is the captain or pilot, who sits constantly on the weather-side of the vessel, observing the shores and promontories as they are approached, and from habit seldom lies down to sleep. Though he has the nominal command over the sailors, these obey him or not according to their pleasure. Next to the pilot is the helmsman, who manages the steering and sails; and besides clerks for the cargo, there is a purchaser of provisions, and another whose express business it is to attend to the offerings and to burn incense. The crew consists of two classes, the able seamen, who are called Tow Mo, 'heads and eyes,' and the ordinary seamen, or 'comrades,' but both classes alike are recruited from the worst characters. All these, with the exception of the last class, have sleeping-berths, just large enough to hold one person. Everyone is a shareholder with the privilege of putting a certain quantity of goods on board. The principal object of all is trade, and the working of the junk would seem to be a subordinate point. The crew exercise full control over the vessel, and oppose every measure which they deem injurious to their own interest; so that the captain and pilot are frequently obliged to submit to them. In time of danger the confusion that attends the absence of discipline, not unfrequently proves the destruction of the

junk. Mr. Gutzlaff adds that, although they consider our mode of sailing as something better than their own, they claim the superiority upon the whole for their own vessels, and would consider any alteration as a retrograde movement.

The Chinese have often been credited, and it would appear with good reason, with the invention of the magnetic compass. Klaproth, writing to Humboldt in 1834, gives the result of his investigations on this interesting subject. The first distinct notice in Europe of the properties of the polarised needle, appears in a satirical poem of Guyot de Provins, about the year 1190; and the next writer who refers to the same phenomenon as one of use to seamen, is Cardinal de Vitry, who visited Palestine in the fourth Crusade, and a second time subsequently at the beginning of the thirteenth century. Subsequently, Brunette Latini, author of a work in French called 'Le Trésor,' written about 1260, observes likewise that it was calculated to be highly useful at sea, but at the same time notices the ignorant prejudice by which navigators were deterred from its adoption; for, says he, 'No master mariner dares to use it, lest he should fall under the supposition of being a magician; nor would even the sailors venture themselves out to sea under his command if he took with him an instrument which carries so great an appearance of being constructed under the influence of some infernal spirit.' A more recent writer, the Jesuit Riccioli, states that, in the reign of St. Louis, the French mariners commonly used the magnetic needle, which they kept swimming in a little vessel of water, and prevented from sinking by two tubes. From the above authorities, and one or two others, M. Klaproth, with sufficient reason, infers that the use of the magnetic needle was known in Europe at

the beginning of the thirteenth century; none of those writers state that it was invented in Europe, but they rather afford a presumption that the knowledge of it was obtained during the Crusades. That the mariner's compass was in use likewise among the Arabs about the year 1242, is proved by a citation from Baylak, an Arabian writer, who mentions it as a contrivance generally known to navigators in the Sea of Syria. M. Klaproth then proceeds to show that the Chinese compass was, about the year 1117, made exactly in the same manner as that seen by Baylak among the pilots of Syria. 'It follows from all these facts,' observes Klaproth, 'that this species of compass was used in China at least eighty years previous to the composition of Guyot de Provins' satire; that the Arabs possessed it nearly at the same time; and that, consequently, the invention was communicated, either directly or indirectly, to the Arabs by the Chinese, and that the Arabs transmitted it to the Franks during the early Crusades.' Gioia of Amalfi, who is commonly supposed to have discovered the use of the needle at the commencement of the thirteenth century, probably obtained it from some Eastern traders.

The attractive power of the loadstone has been known to the Chinese from remote antiquity, but its property of communicating polarity to iron is for the first time explicitly noticed in a Chinese dictionary finished in A.D. 121. Under the head of loadstone appears this definition: 'A stone with which a direction can be given to the needle.' Père Gaubil, in his history of the Tãng dynasty, states that he found, in a work written 100 years later than the above, the use of the compass distinctly recorded. In a dictionary published in the reign of Kang-hy, who flourished in the latter part of the seven-

teenth and first quarter of the eighteenth century, it is stated that under the Tsin dynasty, previous to A.D. 419, ships were steered to the south by the magnet.

But it was not with the compass alone that the Chinese were so early acquainted; M. Klaproth has shown that they had observed long before us the variation of the needle from the true pole. The author of a Chinese work on medicine and natural history, quoted by Sir John Davis, has the following passage: 'When a steel point is rubbed with the magnet it acquires the property of pointing to the south; yet it declines always to the east, and is not due south. If the needle be passed through a wick, made of a rush, and placed on water, it will also indicate the south, but with a continual inclination towards the point ping or $\frac{5}{6}$° south.' Klaproth then shows that such is actually the case at Peking, according to the observations of Père Amiot, who states, as the result of his own experiments during a number of years, that 'the variation of the magnetic needle continues the same in this capital, viz. between 2° and 2° 30′ to the west.' Now, as the Chinese suppose that the point of magnetic attraction is to the south, they of course reverse the foregoing terms, and say that the needle points south, with a variation east. This very difference is a mark of the originality of the Chinese compass, which is farther proved (as Mr. Barron observes) by their having engrafted upon, and combined with it, their most ancient astrological notions. This instrument, instead of consisting of a movable card attached to the needle, is simply a needle of less than an inch in length, slung in a glazed hole in the centre of a solid wooden dish, finely varnished. The broad circumference of this dish is marked off into concentric circles, on which are inscribed the 'eight mystical figures of Fohy, the twelve horary

characters, the ten others which, combined with these, mark the years of the cycle, the twenty-four divisions of their solar year and the twenty-eight lunar mansions.'*

To England, however, belongs the chief credit of perfecting the instruments by the aid of which navigators are enabled to pass over trackless seas, thus ensuring to commerce that regularity and safety which the fury of the tempest so sadly lessens.

> 'Theirs the triumph be,
> By deep Invention's keen pervading eye,
> The heart of Courage, and the hand of Toil,
> Each conquer'd ocean staining with their blood,
> Instead of treasure robb'd by ruffian war,
> Round social earth to circle fair exchange,
> And bind the nations in a golden chain.'

The sailing canoes, or flying proas, of the Ladrone islands are an admirable, and, without doubt, most ancient type of vessel. Dampier, in his 'Voyages,' gives a detailed description of them. He says: 'Their proe, or sailing canoe, is sharp at both ends; the bottom is of one piece, of good substance, neatly hollowed, and is about twenty-eight feet long; the under or keel part is made round, but inclining to a wedge; the upper part is almost flat, having a very gentle hollow, and is about a foot broad; from hence, both sides of the boat are carried up to about five feet high with narrow plank, and each end of the boat turns up round very prettily. But what is very singular, one side of the boat is made perpendicular like a wall, while the other side is rounding as other vessels are, with a pretty full belly. The dried husks of the cocoanuts serve for oakum. At the middle of the vessel the breadth aloft is four or five feet, or more, according to the length of the boat. The mast

* See Sir John Davis's work, 'The Chinese; a General Description of China and its Inhabitants,' pp. 277-79.

stands exactly in the middle, with a long yard that peeps up and down like a ship's mizzen-yard; one end of it reaches down to the end of the boat, where it is placed in a notch made purposely to keep it fast; the other end hangs over the stern. To this yard the sail is fastened, and at the foot of the sail is another small yard to keep the sail out square, or to roll the sail upon when it blows hard; for it serves instead of a reef to take up the sail to what degree they please. Along the belly-side of the boat, parallel with it, at about seven feet distance, lies another boat or canoe, very small, being a log of very light wood, almost as long as the great boat, but not above a foot and a half wide at the upper part and sharp like a wedge at each end. The little boat is fixed firm to the other by two bamboos placed across the great boat, one near each end, and its use is to keep the great boat upright from oversetting They keep the flat side of the great boat against the wind, and the belly-side, consequently, with its little boat, is upon the lee.*

'The vessel has a head at each end so as to be able to sail with either foremost; they need not tack as our vessels do, but when they ply to windward and are minded to make a board the other way, they only alter the setting of the sail by shifting the end of the yard, and they take the broad paddle with which they steer instead of a rudder to the other end of the vessel. I

* The Ladrone flying proa, described in Commodore Anson's voyage, sailed with the belly or rounded side, and its small canoe to windward; by which it appears that these proas were occasionally managed either way, probably according to the strength of the wind, the little parallel boat, or canoe, preserving the large one upright by its weight when to windward, and by its buoyancy when to leeward. These outriggers are also used to the present day by the Cingalese, and all who have used them can certify how admirably they sail.

have been particular in describing these their sailing canoes, because I believe they sail the best of any boats in the world. I tried the swiftness of one of them with our log; we had twelve knots on our reel, and she ran it all out before the half-minute glass was half out. I believe she would run twenty-four miles in an hour. It was very pleasant to see the little boat running so swift by the other's side. I was told that one of these proes being sent express from Guahan to Manilla (a distance of above 480 leagues), performed the voyage in four days.'

Le Maire and Schouten, in the memorable voyage in which they made the discovery of the passage between Tierra del Fuego and Staten Island, overtook, in the Pacific Ocean, far distant from land, on the 8th May, 1616, an outrigger canoe of similar principle, but differing somewhat in construction, to the preceding. Jacob le Maire thus describes this vessel in the 'Navigations Australes des Couvertes:' 'The vessel was formed of two large and handsome canoes, which were placed parallel and at a convenient distance from each other; in the middle of each canoe, a very broad thick plank of a red-coloured wood, and very light, was placed lengthways upon its edge; across the two planks were laid some small beams, and upon the beams a platform of thin planks. The whole was compact and well fastened together. Over one part of the platform was a small shed of matting, under which the women and children remained. There was but one mast and one sail. The mast was fixed in a step towards the fore-part of the starboard (right hand) canoe; the sail was of triangular form, and attached to a yard which rested on the upper end of the mast, which was forked for the purpose. The vessel was

steered with oars abaft. The sail was of matting, and towards the upper part of it there was marked a figure representing a cock, which it is probable was intended, like the flags of more civilised and more powerful nations, to denote to what island or state the canoe belonged. Their cordage was well made; they were provided with hooks for fishing, the back part of which were of stone, and the hook or bearded part of bone, tortoiseshell, or mother-of-pearl. Everything appertaining to the vessel was neat and well fitted for sea.'

The vessel in use among the Peruvians was called the 'balza,' and as Captain Burney observes, 'in the Peruvian method of managing it is to be seen the origin of what has been called sliding keels.' Sir Richard Hawkins (see his 'Observations in his Voyage to the South Seas,' in 1593) saw balzas as low down the coast as Valparaiso, and has described them to be 'rafts made of masts or trees fastened together;' and in the 'Miroir Oost and West Indical,' or journal of Jean Cornelius May, companion of Joris Spilbergen in his voyage round the world in 1614, the only description of the balza, independent of an illustration, is that 'the natives go in them to fish, and that they sail very near to the wind.' Don Antonio de Ulloa, however, in his 'Voyage to South America,' has given a plate and full description of the balza of Guayaquil, as seen by him in 1736. He says that the balzas, or jangadas, as they are sometimes called, are of different sizes, some being used in fishing, some for the carriage of goods in the river Guayaquil, and some for navigating the coast as far as to Payta. They are made of five, seven, or nine poles of a very light wood, which the Indians of Darien call Pucro. Some of these poles, or canes, are twelve or thirteen fathoms in

length, and about two feet or two feet and a half in diameter. The thickest of the poles of which a balza is formed is likewise the longest, and the excess of length is in the after-part. Joining to this, one is placed on each side, and the same is repeated in succession till the whole is completed ; 'the one in the middle serving as mother to the rest, by which means the number is always odd.' They are fastened by strong rope-lashings to each other, and to cross pieces at each end, which render them very secure; but it is necessary to examine the lashings from time to time to see that they are not worn out, for the neglect of such inspection has occasioned some melancholy accidents.

The large balzas have a second platform of canes, and a deck-house. Some of them carry from 400 to 500 quintals, without being affected by the wash of the sea, either running over or rising up between the spars 'by reason that the whole embarkation yields to the motion of the wave.' Thus far, says Ulloa, only the construction and use of the balza has been mentioned. 'There remains to be explained the greatest singularity, which is, that it sails and works when the wind is contrary as well as vessels with keels, and makes good as direct a course. It possesses this advantage by an invention perfectly distinct from that of a rudder, and which experience and necessity have dictated to the Indians, strangers to science ; and in this instance, the contrivances of untutored navigators may be said to have rivalled or even to have excelled the inventions founded on nautical theory. This Peruvian method of steering is by means of some planks three or four yards in length, and half a yard in breadth, called guares, which are disposed vertically both in the fore and after part of the balza, between the principal timbers composing it ; and

by lowering some in the water, and by raising up others, they pursue their course, whether with a side wind, large, in tacking, before the wind, or in veering, and preserve the prow in whatever direction is required.' Don Gorge Juan, the associate of Don Antonio de Ulloa, who composed a short memoir on the use of the guare, which is inserted in Ulloa's work, shows that a guare being put down near the prow of a vessel under sail, will make her luff up (that is, will make her prow point nearer to the wind), and that taking the guare up will make her fall off or bear away from the wind. And, on the contrary, that a guare being put down on the after-part will make the vessel bear away; but being drawn up, will make her steer nearer to the wind. Sometimes five to six guares are used in a balza at the same time, to prevent her from making leeway. The balza of Ulloa has two poles erected as sheers to serve the purpose of a mast, and a square sail which hangs from a yard and is fitted with bow-lines; which 'fashion of rigging,' he adds, 'is doubtless, in part at least, European.' The balza, mentioned in Spilbergen's voyage, is rigged in a more rude and simple manner, the sails being triangular, and the same spar being made to serve both the purposes of mast and yard.

CHAPTER III.

The Phœnicians and Carthaginians, and their Maritime Researches—The Voyage of Jason—The Fleets of Solomon and the Land of Ophir—The Voyages of Scylax, Sataspes, and Jambulus—The Discoveries of Hanno—The Phœnicians in Cornwall—State of Geographical Knowledge among the Ancients.

As the science of navigation advanced at a creeping pace, and but a small amount of fresh experience was laid up by one generation for the benefit of the next, it took very many ages to explore the Mediterranean, Tyrrhene, Adriatic, and Ægean Seas. The people of Tyre and Sidon, the Phœnicians, were among the first whom the spirit of commerce and the desire of gain prompted to fresh discoveries; their great antiquity is perhaps the reason why our knowledge of them is obtained from incidental and isolated accounts. The first Phœnician colonies in Northern Africa were said to have been founded about 1490 B.C., though this is more or less matter of speculation. According to tradition, Carthage owes its existence to Dido or Elissa, daughter of a King of Tyre, who, driven from that city by the cruelty of her brother Pygmalion, who had murdered her husband, established a colony in the vicinity of Utica. Here about the year 878 B.C., 125 years before the foundation of Rome, the great queen, immortalised by the genius of Virgil, founded the city, which was at

one time the rival of Rome in military glory, and her superior in commercial greatness.

The city was built on a promontory, connected by a narrow isthmus with the mainland, and about fifteen miles distant from the modern town of Tunis; on the isthmus was the citadel, called Byrsa, situated on a rock and surrounded by a triple wall, each sixty feet high, and strengthened at intervals with forts, a stupendous and impregnable work. The city, which had a circumference of twenty miles, and a population of 700,000 souls, was bounded on the north and east by the ocean; and, according to Botticher, in his 'Geschichte de Carthager,' on the eastern side of the peninsula was the harbour, formed of an inner and outer basin, the former called Cothon, being used exclusively for vessels of war, and having round its sides the naval storehouses, and the docks, capable of containing 240 ships. The extent of territory subjugated by Carthage is computed at about 1600 geographical miles, and they had settlements as far West as the Straits of Gades (or Gibraltar) and even on the West Coast of Africa. They also seized the Balearic Isles, Sardinia, Corsica, and Malta, and had colonies in Spain, and at one time held sway over the greater portion of Sicily. For two and a half centuries they waged incessant war with the Greek colonies established in the latter island, notably with Syracuse.

With the Carthaginians originated the idea of quitting the Mediterranean by the Straits of Gades, of sailing southward, circumnavigating the coast of Africa, and then returning northward by the Red Sea, towards the Levant, or eastern side of the Mediterranean. This notion seems to have been cherished for ages, as the crowning act of maritime enterprise; knowing only a small portion of the globe, and conceiving that portion

to be upon an extended plane, those who held a voyage from Crete to Egypt to be a signal proof of naval courage, and regarded as a subject of thankfulness and gratitude their having escaped the dangers of Scylla and Charybdis, and the Syrtes, those wavebound prisons of mariners, manifestly feared to commit themselves to unknown waters, tracking shores which the reports of others, who had never seen these regions, no less than their own fears, had represented as the abode of every horror. In short, distance from the land seems to have alarmed all the ancients, who, upon every occasion, when quitting sight of the shore fancied they saw, as Homer tells us:

> 'A length of ocean and unbounded sky,
> Which scare the sea-fowl in a year o'erfly.'

The general truth of these observations is corroborated by the story of the inhabitant of Pamphylia, who was taken prisoner and carried to Egypt, as told by Eustathius, the commentator of Homer. He was kept as a slave, for a very long time, at a town near one of the mouths of the Nile, where Damietta now stands; and, being frequently employed to assist in maritime business, conceived the idea of committing himself to the mercy of the waves in a sailing-boat, in order that he might once again behold his native country. Having provided himself to the best of his means and ability, he set sail, resolving to perish in the ocean rather than remain longer in captivity. He traversed the expanse of waters which lies between Egypt and Asia Minor, and arrived safely at Pamphylia. From this bold and unusual adventure he lost his original name, and received the appellation of Mononantes, or the lone sailor.

The following are among the chief voyages of ancient history with which we are acquainted, beginning with the

famous venture of Jason in search of the Golden Fleece, 'known to every schoolboy,' as Lord Macaulay would have said. This voyage is decidedly apocryphal, but ought not to be omitted in an epitome of the nautical adventures of the ancients. In the thirteenth century B.C., Jason, accompanied by a Phœnician pilot, sailed in the ship Argo, over the Pontus Euxinus, now known as the Euxine or Black Sea, to recover the treasure which had been carried away by Phryxus, in the ship Aries, or Ram. The Phœnician word for 'treasure,' is about the same as the Greek word for 'fleece;' hence, the confusion of ideas, by which the poets profited to adorn their legends, for Jason was reported to have made a voyage to recover the ram with the golden fleece. Those who manned Jason's ship were called Argonauts, or sailors of the Argo; and, at their return, declared that their passage had been alongside of the abodes of the Just and the prisons of the infernal regions. It has been sought to clear up the account of this voyage by the far-fetched explanation that the inhabitants on the eastern side of the Euxine Sea were in the habit of extending fleeces of wool to catch the golden particles which were washed down from Mount Caucasus.

It is believed by some commentators on the Bible, that the Ophir to which Solomon, who lived about a thousand years before the Christian era, sent large fleets, was Malacca, or, as others have it, the West Coast of India, where the recent gold discoveries have been made in what is now called the Wynaad district, or again, on the Mozambique Coast of Africa. These ships were managed by Tyrian mariners who were the most expert of the day; yet, for want of the mariner's compass, their navigation was performed by coasting along the shores.

Regarding the three years required to complete a

voyage to Ophir and back—supposing Ophir to be Malacca—the ignorance of navigation and the frail nature of the vessels put a direct voyage out of the question, and Ophir could have been reached only by coasting along the shores of Arabia, afterwards keeping along that of Mekran, and finally following both sides of the peninsula of Hindostan. The following calculation has been made:

	MILES.
From Ezion-geber, or Dhahab, pursuing the windings of the coast, the western side of Arabia gives a distance of	1206
The southern side of the Peninsula to the coast of Persia, at the Straits of Ormuz	1660
From the Straits of Ormuz to the River Indus	732
From the latter to Cape Comorin	1390
From Cape Comorin to the River Ganges	1350
From the River Ganges to the Straits of Malacca	1500
Total	7838

At the rate of about twenty-five miles in twenty-four hours, this would occupy 313 days, which, with the addition of the Sabbaths, forty-four days, and other halts, as rests, at intervals of about ten days, say thirty-one, would make the outward voyage to the coast of Sumatra quite 388 days; and this is exclusive of detention from bad weather, which must have occurred frequently, especially during the monsoons, for assuredly such frail barks could not venture to proceed, excepting at the commencement or towards the termination of these periodical winds. This applies more particularly to the Red Sea, for outside of the Straits of Bab-el-Mandeb, and again, along the coasts of Mekran and the western shore of India, the only resource would be to haul up the flotilla until the strength of the gale were passed. It is difficult to estimate the time lost in consequence of these delays, outward and homeward; but as a monsoon would

be encountered during each voyage, about three months may be allowed, making ninety days each way; and as from ninety to 120 days would probably be occupied on the coasts of Ophir and Parvaim in waiting for the return cargo, and in refitting the ships, this number of days, with 478 for the return voyage, will give 1076 days, or nearly three years in all for the time consumed in an enterprise which forms one of the glories of Solomon's reign. Some idea of the distance traversed by the ancient mariners, with a fair wind, in the course of a single day, may be gained from the following statement: The fleet of Xerxes, starting from the Euripus, reached Phalerum, a port of Attica, in three days, which is ninety-six miles, or thirty-two miles during twelve hours. Xenophon, in his 'Anabasis,' says, he sailed in two days and one night from Cotyora to Harmene, a distance by sea of 1422 stadia, or 162 English miles, by D'Anville's map. According to Ptolemy, 1000 stadia was the distance a ship would sail in a day and a night.*

An important voyage was undertaken under the orders of Pharaoh Necho, King of Egypt, who in the year 610 B.C. endeavoured to solve the grand nautical problem of Africa. He employed Phœnician navigators to set sail from the Red Sea, and explore towards the south. We are told that they spent three years in the voyage; and as the ships of the ancients had little room for stowing away provisions, they debarked each year on the coast, sowed grain, waited its ripening, reaped, prepared food, and again set sail. At length, to their great joy and astonishment, they reached the Straits of Gibraltar, passed between the pillars of Hercules—two rocks so called as being the nearest and opposite points of the

* Chesney's 'Expedition for the Survey of the Tigris and Euphrates,' vol. i. p. 127.

continents of Europe and Africa—and at length arrived in safety at the shores of Egypt. In the publication of this memorable voyage, the world was astonished at being informed that the sun, while the Phœnicians were passing round the southern part of Africa, was at the right hand; or in other words, that it described its course from east to west, in the northern heavens, thus appearing at midday in the north, contrary to their former experience. For this reason we are given to understand that the relation of this voyage was almost universally discredited among the ancients, though the statement should have moved them to belief.

About 510 B.C., Darius, the son of Hystaspes, being then the sovereign of the vast Persian Empire, influenced by insatiable ambition, planned an expedition to India; but in order that he might acquire some knowledge of the nature of the country he was about to attack, he fitted out a naval expedition, which was placed under the command of Scylax, of Caryanda, with orders to sail down the river Indus into the Southern Ocean, then to return by steering westward for the purpose of acquiring information as to the strength and riches of the countries on both sides of the river, as also on the sea-coast. Scylax, in pursuance of these instructions, passed down the Indus into the Indian Ocean, and, returning by the Straits of Bab-el-Mandeb into the Red Sea, landed on the Egyptian coast, near the Isthmus of Suez. Scylax, who employed about thirty months on this voyage, gave a favourable report concerning the nature of the countries which he had seen, upon which Darius fitted out a naval armament to co-operate with his army in the subjugation of the Indians. This voyage of the Persian monarch opened the way for a more frequent intercourse between India and the nations bordering on the Mediter-

ranean. The voyage of Scylax is believed to have been the first maritime expedition to India.

The next attempt to sail round the continent of Africa was that of Sataspes, a Persian nobleman whom Xerxes had condemned to death, but whose sentence was commuted to the circumnavigation of Africa. He sailed from Egypt, in the year 480 B.C., through the Straits of Gibraltar, and then southward, but, horror-struck at the mighty waves of the Atlantic, he returned home, after beating about for some months, and suffered according to the terms of his original sentence. The Persians were generally unacquainted with maritime affairs, and therefore never made any advance in the naval art worth describing, and hence the Athenians, who had made great improvements in their war-shipping, defeated them when attacked during the reign of Xerxes.

In a collection of ancient voyages, published about 170 years ago, there is a translation of a curious account of the discovery of an island some 500 or 600 years B.C., made by one Jambulus, who is described as having been carried off by the Ethiopians while travelling in India. His captors had a custom, in order to expiate the sins of their nation, once in thirty years of setting adrift in a well-found and provisioned vessel, two strangers, with instructions to steer directly south in order to arrive at a certain fortunate island, inhabited by a king and some hospitable people, with whom they might live happily for the rest of their days. The oracle declared that if these men succeeded in their voyage, the country would enjoy rest and quiet for many years; but they threatened Jambulus and his companion with the severest punishments, in case they did not prosecute their voyage. Having crowned each of them with garlands, they put Jambulus and his companion on board the vessel that

had been prepared for them, and obliged them to put to sea. They were four months tossed by the winds and waves, before they arrived on the coast of the island to which they were bound; but at length they reached it safely. In its form it is 'described as almost round, being about 5000 stadia in compass; containing about 500 of our miles, if we allow 600 stadia to a degree.' When they landed, multitudes came from all quarters to gaze at and admire them, wondering how they came thither, but treating them with the utmost kindness and civility, aud offering them whatever their country afforded. These people are described in detail, one of the peculiarities being a cloven tongue, 'which enabled them to imitate the notes and even the chattering of birds; and, if our travellers say true, they could discourse with two people at once.' This island is said to be situated in a temperate climate, very near the equator. After Jambulus and his companion had continued in this island seven years, they were compelled to depart, their ship being again fitted out for them, and well furnished with provisions. 'Continuing their voyage for above four months, they fell, at length, upon the sandy shallows of India, where Jambulus's companion was drowned, and himself was afterwards cast ashore near a certain village, and carried away by the inhabitants of the place to the king, who was then at a city called Polybothra, or Polunbothra, many days' journey distant from the sea; where he was kindly received by that prince, who had a great love for the Grecians, and was studious in the liberal sciences. At length, having obtained provision from the king, he first sailed into Persia, and from thence safely arrived in Greece.' It has been supposed by most commentators on the above account, that the main incidents are true; and with respect to the island

mentioned, some have supposed it to be Sumatra, others Borneo, others again Java, while one writer has considered it to be one of the Maldive Islands, which we are inclined to believe is the most specious surmise, though the size of the island is against the supposition. Polibothra, or Palibothra, is the name by which Patna on the Ganges was anciently known, and its King Sandracottus received Megasthenes, ambassador of Seleucus, not many years after the invasion of India by Alexander the Great. Sandracottus is identified with Chandragupta of the Shaunjan dynasty, whose grandson was the great King Asoka, who styled himself Pujadasi, and flourished about the year 250 B.C. His far-famed inscriptions are found at different points of India, from Peshawur to Guzerat on the West Coast, and Cuttack on the East Coast. They consist of thirteen rock inscriptions, seventeen cave inscriptions, and six pillar inscriptions, in the two-fold characters known as the Aryan Asoka and Indian Asoka, both derived from the Phœnician alphabet, according to Professor Kern, of Leyden.

Of great historical importance are the two expeditions fitted out about 500 years B.C. by the Carthaginians for the prosecution of discoveries to the north and south, after clearing the Herculean Straits. Himilco is supposed to have visited England and Ireland, which he mentions as Al-fionn and the *sacred* isle, Ierne, but the name of Britannicæ is first applied to them by Aristotle. The second fleet, under Hanno, steered round by Mount Atlas, the 'pillar of heaven,' and doubled the 'African Forehead,' as its great western promontory was called. By day the land was too hot to walk upon, and the country seemed to lie silent and deserted; but by night the mountains seemed on fire, songs of rejoicing were heard, accompanied with the sounds of

flutes, drums, cymbals, and gongs, together with cries which waked the shrill echoes of night, and startled the senses of the Punic sailors.

Here they saw various species of the monkey tribe, including the gorilla, the description of which was believed to be mythical until the accounts of Du Chaillu and other travellers have enabled us to identify a creature, a member of which in the shape of 'Pongo' was one of the 'lions' (to use an Hibernicism) of London in the season of 1877. Hence, some suppose, arose the mythical satyr, just as the Thessalians had before this given rise to the fables of the Centaur by appearing to their neighbours on horses, which they had been the first to tame. Hanno says: 'Having doubled the fiery regions, we three days afterwards entered the Gulf Notu Ceras (the Horn of the East), at the extremity of which lay an island with a lake and islet similar to those we had before discovered. Having touched at this island we found it inhabited by savages. The number of women infinitely exceeded that of the men. They were quite covered with hair, and our interpreters called them gorilles. We pursued them, but without being able to overtake them. They fled over the precipices with astonishing agility, throwing stones at us. We succeeded, however, in taking three women, but were obliged to kill them that we might not be lacerated by them. We have preserved their skins.' Chateaubriand says on this passage: 'The barbarity of the Punic mariners must also strike every reader. The hairy women of whom he speaks were, probably, some species of ape, but it was sufficient that the African commander believed them to be human, to render his conduct atrocious.'

In these places gold was found to be the universal

metal, so common that the chains of captives were forged from it. The Carthaginians relate that the transactions which they had with the people of the African coast, were carried on in dumb show, that, a signal having been made with smoke, the savages placed the goods which they had to dispose of on the coast and retired, and that the Carthaginians, having removed these goods, deposited an equivalent. If that which the latter laid down did not satisfy the former, it was not removed until a suitable addition had been made. This sort of barter is the primeval state of commerce, and is much the same as Captain Cook describes as having been carried on between the crews of his ships and the South Sea Islanders. They were once astounded at the sight of sheets of flames traversing the country and spreading in every direction down to the seashore, which was a conflagration made by the natives to get rid of the dry and waste grass at the end of autumn. Such were the causes of Africa being the reputed dwelling-place of the Gorgons, and other monstrous creations springing from ignorant fear. Pliny tells us that this voyage was effected round the whole extent of the African Continent.

Various conjectures have been hazarded as to the reasons that induced the Carthaginians and their progenitors, the Phœnicians, to invest everything connected with the sea and maritime discovery with such nameless horrors as to affright all the nations of antiquity. It has been surmised, and the hypothesis appears the best we can put forward, that this mystery and these lying fables were invented in order to deter other nationalities from rivalling them as the carriers of maritime trade, and, indeed, Homer speaks of the naval character of the Phœnicians in the most unfavourable terms. The people of

Egypt had long ceased to cultivate the naval art, for they dreaded the sea because it swallowed up their great divinity, the Nile, which the Phœnicians were never allowed to enter. This fear gave the latter power, wealth, and luxury, and they became the great slave-traders of the world, and having once attained a pitch of prosperity, desired to monopolise the trade and commerce of all countries.

Like the Phœnicians, the Carthaginians were remarkable for their duplicity, and the term 'Punic faith' was considered by the Romans as synonymous with treachery. Cicero, in enumerating the characteristics of different nations, assigns to the Carthaginians, industry, cunning, and want of good faith, and though the picture is drawn by the hand of an enemy, their history exhibits numberless instances of treachery and the basest cruelty, while they were guilty of the grossest sensuality, and on occasions, at the demand of their priests, sacrificed their children to appease the anger of an offended Deity. Of this a terrible instance is recorded when Carthage was threatened by the armies of Agathocles, and the people assembled round the colossal image of Baal—the god of the sun and of fire, the Moloch of the Bible and Saturn of the Romans—when 200 children of the aristocracy were sacrificed, and 300 citizens voluntarily precipitated themselves into the flames. It is not known whether Neptune had a temple for his worship in Carthage, though it appears from the coins that the god was represented under a figure resembling that of the Greek Deity, and horses and dolphins were sacred to him, as also lions and the tunny-fish.

The only literary production of the Carthaginians extant, is a fragment of a treatise on farming, by Mago, a 'suffete,' or statesman, and general, though there is

reason to believe that they cultivated with success science and literature, and the names of some Carthaginian philosophers and historians are mentioned by Roman writers. Their language was unknown to the Greeks and Romans, and is supposed to be the same as that of the Phœnicians, and as on the capture of Carthage, in 146 B.C., by Scipio, the city was razed to the ground, the only record of their history is to be found in the works of the Greeks and Romans, the most impartial source being the Greek historian Polybius who visited Carthage during its last struggle for independence.

Thus the treatise of Mago, and a Greek translation of the narrative of Hanno's voyage to the West Coast of Africa, with a few inscriptions and coins, are all the vestiges of the military glory and commercial grandeur of 'the Tyrian' Carthage, a city which produced the greatest general of antiquity. All military critics are agreed that not even the achievements of Alexander and of Napoleon exceed the generalship of Hannibal, who, marching from Spain across the Rhine, the Alps, and the Apennines, with 90,000 foot and 12,000 horse, gained brilliant victories, encamped at the very gates of Rome, and maintained himself in an enemy's country for sixteen years. Not the superior generalship and valour of the sons of Rome, but the enervating luxury of Capua, and the intrigues of a hostile faction, who refused the necessary reinforcements, forced the greatest captain of his age to quit the scene of his triumphs, in order to meet Scipio on the plains of Zama.

It is, with great reason, believed that the Phœnicians, and, though with less probability, the Carthaginians, traded in tin to the south-western coasts and islands of Britain. Even in those distant days Britain was famed for its metals:

'She too the mineral feeds: the obebient lead,
The warlike iron, nor the peaceful less,
Forming of life art-civilised the bond;
And that the Tyrian merchant sought of old,
Not dreaming then of Britain's brighter fame.'

Hence, Cornwall and the Scilly Isles were called by the ancients Cassiterides, or tin countries, a term derived from the Phœnician and Sanscrit, which language, as well as the more corrupt form known to philologists as Prakrit, derives its alphabet from the tongue of the people of Tyre. About 400 years B.C., Pytheas, who lived at Marseilles, then a Grecian colony, directed his course to the north-western parts of Europe. He reached Britain, then called Al-fionn (Albion), or White-land, from the appearance of its cliffs at a distance, and continuing on his course towards the north, arrived at an island which is called Thule, supposed to have been Iceland. Of this place, as also of the other islands and coasts of the sea, he relates that he found, in some parts, the light of the setting sun continuing so strong till dawn of day, that the stars could not venture to appear; in others he found the sun shining by day and night. This account seems to have perplexed those who would otherwise have been inclined to credit him, though this fact, related by Pytheas, is quite natural during the middle of our summer when approaching towards the Arctic circle, and forms a strong testimony to the truth of his narrative. The converse of this, the effects of the Polar winter, felt less in proportion to the diminution of latitude, may apply to the account which we have of Ulysses, who, we read, sailed, perhaps at the fall of the year, to the ends of the ocean, where the Cimmerians dwell in profound gloom, and see neither the rising nor setting sun, but have the veil of night for ever spread over them.

Pytheas drew very largely on the credulity of his contemporaries, as when he described the four and six-horned sheep on the shores of the Baltic, and Tacitus quotes him as his authority for the marvellous assertion that the noise of the sun in its passage below the ocean is heard, and that the figures of the gods appear visible, crowned with immortal light, which it has been sought to explain by the appearance of the phenomenon known as the northern lights. Pytheas intimates, that, in going very far to the north, sea, land, and air seemed all confused, and that the water was so dense that the ship's bows could scarcely force a passage. This enterprising navigator of antiquity is said to have been the first to ascribe the tides to the influence of the moon.

The popular belief even up to the time of Mela, in the middle of the first century after Christ, was that the earth was a huge animal, the heaving of whose breast occasioned the rise and fall of the waters. The followers of Thales, who flourished about 600 B.C., believed the earth to be a sphere, and their successors that it was of a cylindrical form, while some gave it the shape of a drum, and others that of a cube. Many believed it to be a high mountain, with an infinitely extended base, and that the stars moved round and round its summit; but Heraclides, the disciple of Aristotle, who lived about 335 B.C., actually taught that the earth had the figure of a ship. Anaximander, the disciple of Thales, was the first who represented the earth by maps and spheres.

With the improvement of navigation, advanced the knowledge of the earth, though the great geographer, Strabo, compared the Spanish peninsula to 'a hide spread out.' The ancients knew that a great boundary to the west was formed by the Atlantic Ocean; but the confines of the earth towards the east they supposed

were illimitable. Hence the distance on the earth's surface, measured from west to east, they termed longitude or measurement in length, which they supposed infinitely greater than the measurement in breadth north and south, which they termed latitude. The knowledge of this began to be made practically useful for fixing the position of places, hitherto often doubtful, on the earth's surface, by Ptolemy, in the middle of the second century of the Christian era. But in this the most celebrated geographer of antiquity, only approximates towards correctness. The Mediterranean Sea he makes 20° too long; the breadth of the Caspian Sea exceeds the length; and the mouth of the Ganges is placed 46° out of its place. Nor can we wonder that the maps of the ancients should be incorrect, when they were formed from road-books or itineraries, wherein marching distances were set down by the guides of an army, and from a sort of log-book wherein was inserted dead reckoning or the distance the ship had sailed, as calculated from point to point, the magnetic needle being as yet unknown. It was believed up to the middle of the first century after Christ, that the ocean had within itself vast caves, into which the water was regularly received, and out of which it was again as regularly ejected. Previously to quitting the Mediterranean, the tidal influence had not come under the consideration of man, as this sea, as is well known, gives scarcely any indication of that lunar attraction which operates upon the waters of the earth generally.*

* The reason that has been assigned for this tidelessness, as also in the case of the Baltic, is that these seas being almost entirely cut off from the main oceans, the narrowness of the connecting straits does not allow the swell of the great waters to be felt within the requisite time of the moon's passing the meridian.

CHAPTER IV.

The Voyage of Nearchus from the Mouth of the Indus to the River Karoon—Eudoxus' attempt to circumnavigate Africa—Early trading ventures to the Indian Ocean—Travellers' Stories of the East—The Discovery of the Monsoons by Hippalus—Ancient Roman Trading Fleets.

PERHAPS the most famous voyage of antiquity, if not for its discoveries, at least for its historical importance, is that made by Nearchus, the Macedonian admiral, down the Indus, along the coast of Beloochistan, and up the Persian Gulf. It is recorded by Arrian that the object of Alexander in undertaking this voyage, was to survey the islands and shores of the unknown continent; and hence the details are of paramount interest to geographers, and have formed the theme of many treatises of which the great work by Dr. Vincent is the most valuable.

After the defeat of Porus on the banks of the Jhelum (Hydaspes),* Alexander built a fleet for the descent of

* Alexander encamped on the Hydaspes, and founded two cities he called Nicæa and Bucephalia. The former, which was on the site of Alexander's victory, Sir Alexander Burnes identifies with the ruins of Oodeenuggur, fifteen miles below Jhelum, and the latter with some mounds and ruins on the west bank of the Hydaspes. General James Abbott discusses the site of the battle-field in an interesting paper in the 'Journal of the Asiatic Society' for December, 1848, and in other papers, the sites of the cities of Nicæa and Bucephalia, and the identification of the rock Aornos, taken by Alexander, which Curtius considers is the Mahabun, near Sitana and Umb, on the Indus.

the Indus. The greater part of B.C. 326 was consumed in the passage down that river, and the reduction of the different people on its banks. At the close of the rainy season, Alexander, dividing his army into three divisions, commenced his return march, the first division, under Craterus, by Candahar and Seistan; the second, led by himself, through Beloochistan and Mekran to Karman; the third, under Nærarchus, by the sea route to the Persian Gulf. The three divisions met at Susa at the close of B.C. 325.

Alexander himself sailed at the head of the fleet down the Indus and gazed upon the expanse of ocean, which the ancients deemed the circular boundary of the world, running like a river round the earth, the river being itself bounded by the dark clouds of heaven. Such, we are told, was it depicted on the shield of Achilles, which seems to have presented on its surface, a map of the world as then known. What Lucan finely said of the Nile—

'Nec licuit populis parvum te, Nile, videre'—

could have been applied equally well to the Indus, as none knew of its sources, and we are told that Alexander, at sight of the crocodiles, for some time confounded the river with the Nile. On arriving at the mouth of the Indus, the Grecian soldiers were much alarmed at sight of the surge rolling over the bar, and at first scarcely any officer in Alexander's army could be induced to head the further progress of this enterprise, for all felt doubt and dismay at the sight of the ocean, whose angry mood seemed to portend celestial vengeance at their impiety in approaching the end of the world. This horror had been increased by finding, at break of day, their ships, which they had anchored during the night,

left on dry ground by the ebb of the tide. When, however, Næarchus had accepted the command, and they got out to sea, the first thing, we are told, that struck their attention was, that the sun being vertical at noonday, their bodies projected no shadow, and that upon occasion it even deflected towards the south, which was a fiction, for Næarchus was never within 25° of the equator; that stars which they had seen high up in the northern sky, now descended in altitude, or sank altogether below the horizon, and that others never visible before now rose up in the south. For a great part of their voyage they found it difficult, or impossible, to procure corn, so that they were reduced to live upon fish; and, worse than all, as these Greeks dolefully complained, on the flesh of turtle, which abounded on the coast.

Arrian, who flourished about the year 140, gives an account of this famous voyage in his *Periplus*, or 'circumnavigation,' of the Erythræan* Sea, under which term were included the seas between India and Africa, now known as the Indian Ocean, including the Persian Gulf. The history of Næarchus' voyage in the Persian Gulf is easily traceable, and it was within sight of the island of Kishm that he effected his junction with Alexander. From Bardis, now known as Cape Jask, he goes on to say: 'They saw a huge promontory stretched out a vast way into the ocean, which seemed about a day's sail

* The word Erythræan was derived from Erythras, the name of a king of the island of Oarakhta (now known as Kishm) in the Persian Gulf. Arrian says: 'In Oarakhta the inhabitants pretend to show the tomb of Erythras, who, they say, was the first sovereign of their territory, and who communicated his name to the Erythræan Ocean, or at least to that part of it which is comprehended in the Gulf of Persia.' He goes on to say of Kishm, 'It produced plenty of vines, palm trees, and corn, and was full 800 stadia in length. The governor thereof, Mazanes by name, freely offered Næarchus his services, both as a companion and a pilot, in his voyage to Susa.'

distant from them. Those who understood the situation of the country affirmed that this promontory belonged to Arabia, and was called Maceta, and that cinnamon and the fragrant spices were conveyed thence to the Abyssinians. From the shores where the fleet lay at anchor, and the promontory which they then saw before them, the Gulf of Persia, which some call the Red Sea, has its beginning.' This promontory of Maceta is that now known as Cape Mussendom.

While lying at Cape Jask a controversy arose between Nærarchus and Onesicritus, the officer who fulfilled the duties of captain of the fleet, or 'captain of the royal galley,' as the historian calls him. The latter proposed that the fleet should steer directly for Cape Mussendom, and coast along the waters of the Indian Ocean, which in the then condition of the ships would have brought certain destruction upon the entire fleet. Nærarchus was of a different opinion, and summoned his captains to take counsel on the question. He declared 'that Onesicritus must have a shallow memory if he did not remember for what purpose the fleet was ordered to pass those seas.' He then assured them that the voyage was not undertaken because Alexander was unable to convey the whole army safe home by land, but 'because he had fixed the resolution of viewing the situation of all shores, havens, and islands, of searching the bottom of all gulfs and creeks, and having an account given him of all maritime places, and which countries were fruitful and which barren and uninhabited; and therefore they ought not entirely to pervert the whole design when they were now well near the end of their voyage, especially seeing they wanted no necessaries to prosecute it; he was afraid, as that promontory stretched itself so much to the southward, that by sailing round the point they might fall

upon some sandy, barren, and sunburnt region.' Arrian adds, 'Nearchus' judgment prevailed, and this seasonable advice of his seems to have preserved the fleet, for all the country adjacent to that promontory is said to be wild and uncultivated, and wholly destitute of fresh water.' It was truly fortunate for the safety of all who were entrusted to his charge that the admiral's decision met with the approval of the majority, and that the fleet, instead of passing along the sterile shores of Arabia, sailed through the Straits of Ormuz into the less exposed waters of the Gulf, on whose shores fresh water was in some places obtainable.

From Bardis the fleet coasted along to a place called Neoptana, and from thence to the river Anamis, which is that now known as the Minao—a name said to be derived from the words 'min' and 'aub,' that is to say 'land' and 'water.' Lieutenant Wellsted, I.N., about fifty years ago, proceeded up this stream some eight miles to the town of the same name, which he calls Shah Bunder, and describes in his 'Travels.'

The river Anamis is fixed by Arrian in the country of Hermozeia, from which the Island of Hormuz, better known as Ormuz, derives its name. Dr. Vincent, in his learned and painstaking 'History of the Commerce and Navigation of the Ancients in the Indian Ocean,' says: 'The same title is given to this district by Ptolemy, of which his Cape Ormozon is the boundary, and the means by which the name passed from the continent to the island are common to almost every island in the Gulf. This tract is styled Moghostan, or the date country, in Oriental geography, extending to Karpella or perhaps Jask.' Dr. Vincent derived his information for the identification of these places chiefly from that circumstantial traveller, Pietro della Valle, who intended

to settle at Ormuz, then in the height of its prosperity, and took up his residence in Minao on the mainland, on account of the expedition that had been projected by the Persians and English against the island, and which led to its capture in 1622. He informs us that 'Mina is the capital of Moghostan, and this its name implies, for Mina signifies a fort, and Moghostan is a district of the ancient Karmania, extending from Cape Jask to the north of Gomeroon,' the modern Gombroon or Bunder Abbas. He adds, 'The heats are insupportable, and the climate most unhealthy;' but a more particular circumstance he notices is that the river, which rises in the neighbourhood, falls into the Gulf about a day's journey from the city, and this river can be no other than the Anamis of Arrian, and the Andanis of Ptolemy. On its banks took place the unexpected meeting between the great Alexander and his admiral, so graphically described by Arrian in his 'History of the Expedition of Alexander the Great and his Conquest of Persia.'

We are told by the historian that in honour of his admiral and in gratitude for the safety of his fleet, Alexander offered sacrifices to the gods, and also 'exhibited sports of music and wrestling, himself leading on the show. Nearchus was honoured with the chief place there, and had flowers and garlands strewed before him by all the army.'

Setting sail from Carmania, Nearchus and his fleet proceeded along the coast of Ormuz, until they arrived at Kishm. Between this island and the Persian mainland, lie the Clarence Straits, and Arrian makes mention of the people of these coasts, whom he designates 'Ickthiophagi,' or eaters of fish. After leaving the Clarence Straits, Nearchus sailed along the Persian coast, 'past a small desolate island, called Pylora, on

the left hand, and arrived at Sidodone, a small town destitute of all necessaries but fish and fresh water.' Pylora or Polior, forms one of a group, of which the others are Nobfleur, Surdey, and the Little and Great Tomb, at the latter of which the Grecian fleet anchored. Dr. Vincent had great difficulty in fixing the site of Sidodone, the town where Nærarchus watered his fleet, but Buckingham, in his 'Travels,' expresses an opinion that it is the modern town of Shinaz, where those two necessaries, fish and water, can be obtained in abundance.

Arrian, in recording the design which Alexander entertained of invading Arabia by sea, enters into a description of that portion of the country which borders on the Persian Gulf, near the mouth of the Shatt-ul-Arab. He speaks of two islands, one of which was not above 120 stadia distant from the mouth of that noble river. This was the lesser of the two, covered with thick woods, and on which was a temple dedicated to Diana, the 'Goddess of the Silver Bow,' round which the inhabitants had their dwellings. According to Aristobulus, Alexander ordered this island to be called Icarus, from one of the same name in the Ægean Sea, near which Icarus, the son of Dædalus, fell into the sea and was drowned, for having, according to the well-known old Greek legend, attempted to fly into the upper regions with wings cemented with wax. Buckingham expresses an opinion that this island of Icarus is the more northern of a group near the town of Koweit, or Grane, and he is strengthened in this conviction both by the fact that 120 stadia, about twelve or fifteen miles, the distance this island was said to be from the mouth of the Shatt-ul-Arab, is too great to allow of its being identical with Karrack, and also because Strabo mentions

the same island, and most distinctly states that it would be on the right hand of a voyage from the mouth of the Euphrates to Arabia, and this, consequently, would bring it near that coast. According to Strabo the temple already spoken of was erected in honour of Apollo instead of Diana; but in other particulars he agrees with Arrian. In opposition to Buckingham's view, Captain (afterwards Sir John) McDonald Kinneir, who, under Sir John Malcolm's orders proceeded, in 1810, on a mission to Bussorah, has, in his 'Geographical Memoir of the Persian Empire,' fixed upon Karrack as the Icarus of Arrian, though that island, instead of fifteen, is 100 miles from the mouth of the Euphrates, and on sailing towards the coast of Arabia, it would be on the left instead of on the right hand. From its relative importance and the probability that Alexander's fleet passed near Karrack, while proceeding to the Shatt-ul-Arab, we should say that that island was more probably the Icarus of the Greeks as the islands near Koweit are of small extent and almost out of the track of ships.

Nearchus—whose voyage, commenced in October, occupied twenty-one weeks—joined Alexander near Ahwaz, on the Karoon, in Susiana, now known as Khuzistan. Alexander marched through Susiana, but as no mention is made of Ahwaz, or of its ruins, though he must have passed close to its present site, there is good ground for believing that it could not have existed in his day, though Chesney is of opinion that the village of Agines, which is mentioned as being 500 stadia from Susa, and through which Alexander passed with his army, was on the site of Ahwaz. Sir Henry Rawlinson, in his 'Memoir of a March from Zohah to Khuzistan' (vol. ix. of the 'Journal of the Royal Geographical

Society '), in order to reconcile the conflicting statements of the ancient geographers, has assumed the river Karoon is the Eulæus; the Dizful, the Coprates; the Kirkhah, the Choaspes; and the united arms of the Karoon and Dizful rivers, the Pasitigris.*

The result of Alexander's victories in Asia was, that the whole tract of country from the Mediterranean to the Indus, and from the Jaxartes and Caspian to the sea, was subdued, garrisoned, and colonised. Alexander died in the spring of B.C. 323, but his empire, though of only ten years' growth, was not transient. His colonies, says Mr. H. Prinsep, and their institutions, manners, and language, had struck deep root even in this short period, and the impulse towards Hellenism had a lasting action in Central Asia, the effects of which were felt at least 500 years after the decease of the conqueror.

One of the most remarkable navigators of ancient times was Eudoxus, a native of Cyzicus, who flourished about 130 years B.C. He seems to have been a citizen of fortune. Like many others whose ardent minds have impelled them to travel, the strange and unheard-of things he described brought down on his head the misrepresentation and ridicule of the geographers and critics of his time. Bruce, who had related the circumstance of

* The continual changes which have occurred in the course of the various rivers of Khuzistan, render it a well-nigh impossible task to identify these streams from the accounts given by Quintus Curtius and other historians of Alexander, of the entrance of Nearchus into Susiana, and Dr. Vincent is at fault when he attempts to identify them with Arrian's account. Mr. A. H. Layard, in his 'Description of the Province of Khuzistan' (vol. xvi., 'Journal of the Royal Geographical Society'), enters into a learned dissertation on this point, and assumes with Professor Long (vol. xii. of the 'Journal of the Royal Geographical Society'), that the Shapur is the Eulæus, and that the united waters of the Shapur, Karoon, and Dizful, were also known by that name, as well as by the name of Pasitigris.

an Abyssinian cutting steaks from the flank of a cow, skewering up the wound, and then driving her out to pasture, was thus satirised by a witty poet of the day:

> 'Nor have I been where men—what lack, alas!
> Kill half a cow, and turn the rest to grass.'

But later travellers have spoken to the accuracy of this cruel practice, and many other observations and statements of this celebrated traveller have been confirmed by later writers.

Eudoxus, encouraged by Ptolemy Euergetes, King of Egypt, and his successor, made several voyages down the Red Sea, and towards the East, but when he had resolved to pursue the grand object of nautical ambition, the circumnavigation of Africa, he seems to have eschewed royal patronage, and to have set out on his own account, with the assistance of some friends whom he induced to join him. It should be observed that the traditions, or records, of the circuit of Africa, having been formerly made, were now becoming apocryphal, the geographers of the time having decided that the regions to the south, or the torrid zone, were utterly uninhabitable by reason of the extreme heat, while the regions to the north, forming the frigid zone, were unapproachable by reason of the intense cold. They believed, theoretically, that there was another temperate zone corresponding with their own beyond the torrid, but that this southern temperate zone was completely severed from the northern by unendurable heat. Hence, in the time of Mela and Ptolemy, it was asserted that the ocean passed through Africa, and that the Nile rose in the southern division, and, flowing under the sea, appeared again in Upper Egypt.

Eudoxus set out upon his adventurous voyage, and

for some time all proceeded favourably, until the crew, fearing that they would be swallowed up by the stormy billows of the Atlantic, hugged the shore so closely that the ship was stranded on one of the dangerous sand-banks abounding on the coast. A smaller and more compact galley, of fifty oars, was formed from the fragments of the stranded vessel, in which ship he continued to proceed southward, but was at last forced to return, his resources not being equivalent to the undertaking after the disaster he had incurred. He is said to have made a second attempt, with the issue of which we are not so well acquainted.

Eudoxus seems to have been regarded as an impostor, and he is reported to have told many fables and other absurd stories of his voyages and adventures, though, according to some, he really made the circuit of Africa. He said that some nations he found without tongues; of others, that, being mouthless, they received their food up the nostrils. Regarding this navigator, there is a remarkable passage in Pliny (see his 'Natural History,' book iii., chapter lxvii.), who says:—'Eudoxus, trying experiments upon the courses of the trade-winds, lost his passage, and was thrown upon the coast of Ethiopia. In the course of the voyage he discovered a portion of the prow of a vessel, which had been broken off by a storm. The figure of a horse* made it an object of inquiry; and some of the sailors on board, who had been employed in European voyages, immediately knew this wreck to be part of one of the vessels used in trade to the Western Ocean. Eudoxus instantly perceived all the importance of the discovery, which amounted to nothing

* At the present day the figure of a horse is a common ornament on the prows of the native vessels of Surat.

less than that there was a passage round Africa from the Indian to the Atlantic Ocean.'

When the Romans became a nautical nation, it was with the double object of gratifying their love of conquest and the demand for luxuries which latterly sprung up and sapped the virtues of Republican Rome. For these luxuries the extremities of the known world were ransacked, and thus maritime enterprise was indirectly promoted; while their ships, when unemployed in war, made a survey of the dominions which their power had acquired. Thus, at the end of the first century of the Christian era, Agricola, the Governor of Britain, discovered it to be an island by sailing round it. The opportunity for surveying the coasts of the Erythræan Sea was furnished by the regular trading voyages, undertaken by the Alexandrian merchants, from the northern ports of the Red Sea down into the Indian Ocean. The merchant vessels of the Roman Empire seem to have navigated this Erythræan Sea as far south as Madagascar, and to the east up to the western coast of India, of which Arrian gives us an account in the 'Periplus,' a work which is still of interest as denoting the small change that time has wrought in the manners of the people, and the productions of their countries.

The keenness and activity of the Greeks inspired the Phœnicians with apprehension lest they should draw away from them the trade of which they had enjoyed a monopoly. They therefore invented stories of 'Gorgons, and hydras, and chimeras dire,' and told how they had met in various climes with—

> 'The cannibals that did each other eat,
> The Anthropophagi, and men whose heads
> Do grow beneath their shoulders.'

The Phœnicians brought the gold and gems and spices of the East to Tyre and Sidon, by caravans or land-carriage, and distributed them to the nations of the West by means of their shipping on the Mediterranean. From an early period, however, they thirsted to gain possession of some port which should give them a command of the navigation of the Red Sea. This object, for a long time, they could not attain; for the eastern shores of the Red Sea were in the hands of the Arabians and Assyrians, while the western shores were in the power of the Egyptians and Ethiopians. They therefore tried to acquire some port on the Mediterranean, near the Isthmus of Suez, in order that, by a land-carriage of a few miles, they might connect together the navigation of the Mediterranean and the Red Sea, and, at length, attained this object by gaining possession of Rhinocorura, a city on the boundary between Palestine and Egypt. Thus, by making the Red Sea the channel of communication between Tyre and the Eastern countries, instead of transporting their commodities by land, they extended their commerce to a vast extent.

The jealousy with which the Phœnicians regarded any attempt on the part of other nations to share with them the advantages and profit derivable from commercial navigation, was strikingly shown in numerous instances. It is said, that if, when bound on a foreign voyage, they observed a stranger in company with them, and found him endeavouring to pursue the same track, they immediately altered their intended course, using every possible means to avoid him, and to prevent him from following them; and sometimes they purposely risked the loss of their vessels, and their own lives, rather than afford other nations any opportunity of breaking into their monopoly by sharing in the commerce of the

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world. So fearful were they of rivalship, and so pertinaciously bent on keeping everything to themselves, that to add to the natural dangers of the seas, and to discourage other nations from exposing themselves to it, they would attack any vessel of inferior force. Inspired by these fears, terrific accounts of the dangers of foreign navigation were propagated among the lively, but credulous, people of the Morea, who not only received these stories with facility, but added embellishments of their own, and the Greeks promulgated these accounts in their various writings with all the literary skill for which they were pre-eminently distinguished.

What little knowledge the people of antiquity had of the East, came to them by commercial transactions. They heard that the precious commodities of Oriental countries were obtained under circumstances of peculiar difficulty and peril, and so hideous and alarming were the objects to be encountered, after escaping the dangers of the sea, that the task of purveying the desired luxuries was gladly relinquished to those who chose to undergo such danger. The golden sands of India, they were told, swarmed thickly with ants as big as foxes; and wonderful caution and expedition was necessary in gathering up the precious dust, loading it on camels, and getting off before swarms of these monstrous insects should environ and destroy both men and beasts. Cinnamon, Herodotus tells us, was brought from the country of Bacchus, that is, India. It was carried into Arabia by certain birds for the purpose of forming their nests, which were built on dangerous and inaccessible places. The Arabs would strew large pieces of flesh below their nests, which the birds descending would carry off to their young; the nests would break down with the weight, and an opportunity of gathering up the cinna-

mon was afforded. Cassia, it was said, was found on the borders of a lake by persons covered over with hides and skins, to save themselves from the assaults of enormous bats, which occupied the neighbouring trees. The real truth appears to be, that these celebrated spices, which the Egyptians sought after, and which the Hebrews used in the composition of the holy oil, were brought from the coasts of the islands of Ceylon and Sumatra by Arabian merchants, who engrossed the commerce of the Indies, until the discovery of the north-east and south-west monsoons and the improvement of navigation enabled the Greeks to take to the open sea, instead of hugging the shores of Arabia. For many ages these Arabians were met by the Phœnicians, whose place was afterwards usurped by the Greeks.

Whether frankincense came originally from the land of Arabia, or from the mountains of India, it was said that winged serpents were its jealous guardians. We are also told of trees bearing wool for fruit, by which is meant the cotton-trees. Then there were wild stories of syrens, who seduced and changed the hardy mariners into beasts, of one-eyed cyclops, to whom the human kind were but as insects, who cut the tallest trees of the forest for their walking-sticks, and also people with the heads of horses. No wonder that travellers' stories have from the earliest times formed the subject of satire, and been received with incredulity.

The first great natural relief, given to ancient navigation, was the discovery of the monsoons which prevail in the Indian Ocean, which, if noticed by the Arabians, was not made to serve their maritime trade, until the keener enterprise of the West, in the person of Hippalus, about 50 A.D., first ventured to steer off across the Indian Ocean instead of coasting Arabia. A voyage which had consumed

months now took up but as many weeks, by a conformity on the part of the mariner with this invariable law of nature. The means of profit and information were now less monopolised, and the West became better acquainted with the inhabitants and produce of the East. The navigation to the Indies was continued, when the Romans became masters of Egypt, by sailing down the Red Sea, and thence to the mouth of the river Indus, along the southern coasts of Arabia and Persia. But under the Emperor Claudius, this route was so far changed, that after emerging from the Red Sea, they cut across the Indian Ocean directly to the mouth of the Indus, by noticing, and taking advantage of, the time when the north-east and south-west monsoons blew.

The trade was carried on with India thus : The goods that were intended for the Indian markets were embarked at Alexandria, and carried up the Nile, a distance of about 300 miles, to Coptus. From the latter place the merchandise was carried on camels' backs to Berenice, on the Red Sea, a distance of 260 miles, where the goods were warehoused until the proper season for sailing. From Berenice the traders steered for the opposite coast of Arabia, and took on board frankincense, and other Arabian commodities, giving arms, knives and vessels, in return. They now proceeded on their voyage to India; whence, having disposed of their articles of merchandise, and got gold, spices and drugs, in return, they pursued their voyage back to Egypt, where they usually arrived about December or January. The Indian commodities were conveyed from Berenice to Alexandria, whence a fleet sailed annually to Rome, conveying the treasures of the East.

That the shipping interest must have been a very important branch of commerce under the Empire is evident,

says a writer, from the magnitude of the Mediterranean trade, which ministered for many centuries to the necessities and luxuries of the Imperial city. Corn from Sicily and Africa was carried yearly in numerous fleets of what we should now call small craft, and the gems, spices and silks of India found their way to the Roman palaces by a regular course of Red Sea traffic.

Various laws passed to regulate shipping affairs have come down to us. In the second century, B.C., no senator or father of a senator was allowed to own a sea-going ship of a greater capacity than 300 amphoræ, and aristocratic traders were discountenanced down to the days of Honorius and Theodosius, when it was declared that the respect due to persons of quality rendered it necessary to deprive them of the full liberty of trading, which should be confined to men of base extraction. When Cicero laid it down that trade on a small scale was mean, but that large dealings and conveying merchandise from foreign parts were more honourable, he only drew the distinction between the merchant and the shopkeeper so carefully made by society in our own day, and from some further remarks of the great orator, it is evident that the Roman merchants were just as fond as our own of buying an estate in the country with the fortunes they had made in trade. The world of those days was bound in the chains of commerce, though they were not powerful enough, as we see in our time, to bear the strain of warlike aspirations on the part of the people. Still

> 'Commerce round the world
> Had wing'd unnumber'd sails, and from each land
> Materials heap'd.'

Import and export duties were an important feature of Roman Government, and British goods and produce

paid transit dues on their passage through Gaul, while various customs tariffs extended through the Empire. On the other hand, there were at times large bounties upon the importation of corn, as when Tiberias allowed the dealers two sesterces a measure, and when Claudius guaranteed importers a certain rate of profit. In maritime matters, the Romans adopted what was known as the Rhodian Code, from which the maritime law of the present day is derived.

At the time the Eastern Empire was formed by the division of the Roman state into two parts, the maritime and commercial arrangements of Rome were very extensive. One fleet, called the fleet of Alexandria, was destined to bring to the capital the produce of India, as conveyed to the Red Sea; another fleet was that of Seleucia, in the River Orontes, by which an intercourse was kept up with Persia and higher Asia; a third fleet was stationed in the Euxine, or Black Sea, by which corn was brought, then, as now, to Europe. Shakespeare makes Pompey allude to this fleet when he says:

> 'I must
> Rid all the sea of pirates; then, to send
> Measures of wheat to Rome.'

The rise of Constantinople inflicted a severe blow on the maritime supremacy of Rome, by diverting the course of navigation, and from this time the metropolis on the Bosphorus, whose unrivalled situation was quickly recognised, became the great depôt for the produce of the East. The Gothic irruptions, and consequent downfall of the Roman Empire, adversely affected navigation, with all the other arts and sciences. But, as Gray says in his 'Progress of Poesy:'

> 'When Latium had her lofty spirit lost,
> They sought, O Albion! next thy sea-encircled coast.'

CHAPTER V.

The Saracens as a Maritime Nation—The Narratives of Soleiman, Massoudi, Abulfeda, Edrisi, and Ibn Batuta—The Traditional Voyage to America of Madoc—The Search for the Land of Gog and Magog.

ABOUT the beginning of the sixth century, when the Eastern, or Byzantine, portion of the dismembered Roman Empire was assailed by the Saracens, Mathuvius, a Saracen chief, fitted out a powerful fleet and conquered the Island of Cyprus, and then seized upon the Island of Rhodes, whence he conveyed away the materials of which the famous Colossus* had been formed. When the Saracens, in their rapid career

* This stupendous figure was made of brass, and passed for one of the seven wonders of the world. Its feet were upon the two moles at the entrance of the harbour, and ships passed in full sail beneath it, its height being about 105 feet. Some years after its construction, it was overturned by an earthquake, 224 B.C., and, as the Rhodians had a superstitious opinion that it should never be used for any other purpose, they allowed the fallen statue to remain on the ground; the Saracens, however, had no such scruples, but broke it up, and loaded 900 camels with the metal, which they sold to a Jewish merchant for £36,000 English. A winding staircase ran up to the top, from which it was said the distant shores of Syria, and the ships of Egypt as they traversed the Bay of Alexandria, could be discerned by means of glasses suspended from the neck of the statue. The image remained in ruins for nearly 900 years, although the people of Rhodes had collected large sums of money for its repair. This money, however, they seem to have appropriated; which was, perhaps, the true reason why they feigned or felt reluctance to raise up the image, and pretended that the oracle of Delphi forbade it.

of conquest, reached the Euphrates, they immediately perceived the advantage to be derived from an emporium situated upon a river which opened a route to India, and an extensive inland navigation through a wealthy country; and Bussorah, which they built A.D. 636, on the west bank of the Shatt-ul-Arab, which signifies 'the river of the Arabs,' soon became a great commercial city, and entirely cut off the independent part of Persia from the Oriental trade. The Arabian merchants of Bussorah extended their discoveries far beyond the tracks of all preceding navigators, and imported directly many Indian articles, hitherto procured at second hand in Ceylon, called Taprobane, and then exported them to the nations of the West. The victorious Saracens, by their conquests, deprived Heraclius, the emperor of the East, of the wealthy, and, in some degree, commercial province of Syria. The little commerce now remaining to the Roman Empire also fell into their hands, with the city of Alexandria and the province of Egypt. A few years afterwards, the ancient canal between the Nile and the Red Sea is said to have been cleared out, and again rendered navigable, by Amrou, the Arabian conqueror and governor of Egypt, in order to furnish a shorter and cheaper conveyance for the corn and other bulky produce of the country.

After the attempt made by Amrou, fresh efforts were made by the Saracens to connect the Mediterranean and Red Seas, by means of a navigable canal, a purpose sought to be accomplished in various ages of the world, by people who have given their attention to maritime affairs. Many thousands of human beings have perished at different times in labouring to cut through this neck of land. The Ptolemys of Egypt, the Greeks, the Romans, and the Saracens, have all attempted, but failed

to effect the object. The French, when in Egypt, under Napoleon, traced out the ancient line, and, as all the world knows, M. de Lesseps has earned for himself and his nation immortal renown by actually carrying through the great work in the face of the adverse prognostications of English engineers, and the opposition of British statesmen, of whom Lord Palmerston was the most persistent. Probably no engineering work of ancient or modern times has worked such incalculable advantage to the human family.

About the year 670, the Saracens, whose fleets now rode triumphant in the Mediterranean, and who had already taken possession of Cyprus, Rhodes, and many of the Grecian islands, laid siege, for the first time, to Constantinople. For seven years they annually renewed the siege by sea and land, with varying success, but were ultimately repulsed, after the loss of 30,000 men and most of their ships. Their defeat was, in a great measure, brought about by the invention of a peculiar mode of offensive warfare, called the 'Greek fire,'* which was then used for the first time by Callinicus, a Syrian Greek.

During the dark ages, after the destruction of the Roman Empire, the Christians of Europe were excluded from almost every channel by which the precious goods of the East had formerly been conveyed to them. An

* Gibbon supposes that it consisted principally of naphtha, a kind of liquid pitch, of a highly combustible nature, which springs out of the earth; this was mixed with sulphur, and a kind of turpentine extracted from evergreen firs. Sometimes it was poured down from the ramparts from large boilers, sometimes javelins and arrows were wrapped round with tow dipped in this mixture; and at other times it was deposited in fire-ships, from which it was, by some contrivance, blown upon the enemy through long tubes. When once kindled, nothing could stop the flame, and water fed instead of extinguishing it.

inveterate antipathy, inflamed by religious bigotry, which made the Christians consider the Mahommedans as the enemies of God, while they, on the other hand, abhorred the Christians as Infidels, was almost an insuperable bar to commercial intercourse. But the mutual alienation produced little or no inconvenience to the Saracens, who found ample scope for commercial enterprise within the vast extent of their own dominions. Owing to the scanty supply of Oriental goods, some Arab merchants were tempted by the enhanced price to traverse the vast extent of Asia in a latitude beyond the northern boundary of the Saracenic power, and to import by caravans the silks of China, and the valuable spices of India; these, notwithstanding their enormous price, were eagerly purchased by the luxurious and wealthy courtiers of Constantinople, whose demands for silk the manufacturers of Greece were not capable of supplying to their full extent. For ship-building purposes the Saracens employed the timber from the forests which clad the sides of the mountains of Lebanon, which had furnished materials for building the fleets of Tyre and Sidon in the infancy of navigation.

About the year 850, Soleiman, an Arabian merchant, wrote an account of the state of the maritime commerce between the Arabians and Chinese. He says that in his time the Arabian merchants had extended their commerce and their discoveries in the East, far beyond the utmost knowledge of the Greek merchants of Egypt, or the Ethiopian merchants of Adulis, near Massowah. Their vessels now traded to every part of the Asiatic continent, as far as the south coast of China, and to many of the islands. Soleiman speaks of the Chinese, of whom scarcely anything was at that time known to the Western world. He says: 'When foreign vessels

arrive at Can-fu (supposed to be Canton), the Chinese take possession of their cargoes, and store them in warehouses till the arrival of all the other ships which are expected, whereby they are sometimes detained six months. They then levy a tax of thirty per cent. on the goods in kind, and restore the remainder to the merchants. The emperor has the right of pre-emption, but his officers, fairly and immediately, pay for what he takes at the highest price of the articles. Chinese ships trade to Siraf by the Persian Gulf, and there take in goods brought from Bussorah, Oman, and other places, to which they do not venture to proceed on account of the frequent storms and other dangers in that sea.' Soleiman mentions, though it appears almost incredible, especially if we regard the total absence of trade between China and the Persian Gulf in the present day, that 'sometimes there were 400 Chinese vessels together in the Persian Gulf, loaded with gold, silks, precious stones, musk, porcelain, copper, alum, nutmegs, cloves, and cinnamon.' At the period to which these accounts refer, the Saracens had removed their principal seat of commerce almost entirely to the Persian Gulf, which is sometimes called the Green Sea, from the appearance of its water. Pearls were from time immemorial obtained from these parts, to which the poet Moore alludes in the song of the Peri :

> 'Farewell—farewell to thee, Araby's daughter!
> (Thus warbled a Peri beneath the dark sea;)
> No pearl ever lay, under Oman's green water,
> More pure in its shell than thy spirit in thee.'

Here also was said to be found the star-fish, which was luminous, referred to by the same poet when singing the dirge—

> 'Of her who lies sleeping among the pearl islands,
> With naught but the sea-star to light up her tomb.'

The entrance to the Gulf of Persia—sometimes erroneously called by old writers the Gulf of Oman, which is a small sea outside the Gulf between Ras-ul-Had and Ras Mussendum—is bounded on one side by three small islets, called the Quoins (from their resemblance to the 'quoin,' or chock, of a gun), the largest of which, called the Great Quoin, is known among the natives as Sellameh, or Safety. As Sellameh is the eastern extremity of Arabia, so the strait or passage at the western end of the country, giving entrance to the Red Sea, received from the Arab navigators the poetical name of Bab-el-Mandeb, or the 'Cape of the Great Affliction.' Of these straits Moore writes:

> 'But lone, unheeded, from the bay
> The vessel takes its mournful way,
> Like some ill-destined bark that steers
> In silence through the Gate of Tears.'

Richardson says the Straits of Bab-el-Mandeb received the name of Gate of Tears from the old Arabians, on account of the danger of the navigation, and the number of shipwrecks by which it was distinguished, which induced them to consider as dead, and to wear mourning for, all who had the boldness to hazard the passage through it into the Indian Ocean. Taking advantage of the ignorance of landsmen, and the dwellers on the shores of the Mediterranean, where the Pillars of Hercules, as the entrance to that sea was called, seemed the end of the habitable globe, the bold seamen who navigated the Indian Ocean spread strange stories of the monsters, rivalling anything heard in our time of the sea-serpent, that they had encountered in their voyages. It is narrated by some navigators that they saw the strangest sight which they had ever beheld, which was the head of a fish, 'that might be compared

to a hill ; its eyes were like two doors, so that people could go in at one eye and out at the other.'

The west side of the Red Sea appears, about the end of the ninth century, to have been deprived of all foreign trade. The vessels from Siraf, in or near the Persian Gulf, delivered their cargoes at Jidda, the port of Mecca, which appears not to have been used when the 'Periplus' of the Erythræan Sea was written. From thence the goods destined for Egypt, Europe, and Africa, were forwarded in vessels manned by natives acquainted with the navigation of the Red Sea, the many dangers of which deterred the foreign navigators from proceeding any further in those parts. We are told that the Red Sea coasters carried the goods to Cairo, which had now superseded Coptus, as the general deposit of merchandise upon the Nile: and if that be strictly true, the vessels must have proceeded through the canal, which was restored by Amrou, the Arabian conqueror of Egypt.

The Saracens continued for a long period to maintain a naval superiority in the Mediterranean, whether for the purpose of war or of commerce. Some of the Saracenic vessels were of a very large size. It is recorded that about the year 970, Abderrahman, the Saracen Sultan, or Caliph, of the greater part of Spain, built a vessel larger than had ever been seen before in those parts, and loaded her with innumerable articles of merchandise for sale in the Eastern regions. On her way she met with a ship carrying despatches from the ruler of Sicily to Almoez, a sovereign on the African coast, and pillaged her. Almoez, who was also King of Sicily, which he governed by a viceroy, fitted out a fleet, which took the great Spanish ship returning from Alexandria, laden with rich wares for Abderrahman's own use. Many other instances of ships of a very large size having been

constructed by the Saracens are on record, and their successors in the sovereignty of the Mediterranean, the Spaniards, also built the largest vessels of the time.

Such was the state of human knowledge during the Middle Ages, that Cosmas, an Egyptian monk of the sixth century, who received the name of *Indicopleustes*, or, *the voyager to India*, wrote the 'Topography of the Christian World,' the chief intent of which was to confute the heretical opinion of the earth being a globe, together with the pagan assertion that there was a temperate zone on the other side of the torrid zone. He informed his readers that, according to the true orthodox system of cosmography, the earth was a quadrangular plane, extending 400 courses, or days' journeys, from east to west, and exactly half as much from north to south, enclosed by lofty mountains upon which the canopy or vault of the firmament rested; that a huge mountain on the north side of the earth, by intercepting the light of the sun, produced the vicissitudes of day and night; and that the plane of the earth had a declivity from north to south, by reason of which the Euphrates, Tigris, and other rivers running southward are rapid, whereas the Nile, having to run uphill, has necessarily a very slow current. The system at least showed that Cosmas possessed the faculty of imagination to a high degree.

Massudi, who wrote a general history of the known world in 947, compares the earth to a bird, of which Mecca and Medina are the head, Persia and India the right wing, the 'land of Gog' the left, and Africa the tail. Edrisi, like Ptolemy, divides the world into seven climates, beginning with the equator, and going northwards; these climates are distinguished by lines running

from west to east, which resemble the lines of latitude on a modern map or globe. The mechanical division of the earth into climates was continued for many ages, until the researches of modern science came to adopt the parallels of latitude for marking off breadths on the earth's surface. This celebrated Arabian geographer supposed the earth to float in the ocean, 'like an egg in a basin of water,' and to be surrounded by clouds and thick darkness. He further says that, owing to the impossibility of passing the equator by reason of the heat, the known world consists of only one hemisphere, partly land and partly sea, the whole surrounded by the great ocean.

The Arabs, in pursuit of commerce, penetrated into all regions, and the daring researches of their seamen was bounded only by the Northern Ocean, which they termed 'the sea of pitchy darkness.' India was visited regularly, and also the interior parts of Africa, and although fable insinuated itself into the more veracious narrative of the geographer and historian, yet enough remains to show that attempts were made to cross the Atlantic and anticipate the discoveries of Columbus and his compeers.

There belongs to Welsh history some strange traditions respecting the adventures of Madoc, a prince of North Wales, who is said to have first discovered America at the latter end of the twelfth century. Owing to certain domestic contentions about the sovereignty, Madoc determined—so runs the story—to go out voyaging to a great distance, and having procured men and ships and all necessaries, set sail on his perilous venture. When they had been many weeks at sea, and had been much tossed about, they at length, to their great joy, discovered land, which seemed at first like a

cloud resting upon the distant waters. Seeing that it was quite steady they concluded it to be land, and, sailing towards it, found it to be a fertile and pleasant country. Here they settled, and, in course of time, Madoc returned to Wales, whence he brought fresh men and ships, by means of which he stocked the country, where they all remained. Thus far the legend.

Two Arabian geographers already mentioned, Abulfeda (also called Ibn el Vardi) and Edrisi, give a curious and almost identical account of a voyage made on the Atlantic Ocean, or Sea of Darkness, by the Almagrurim, or the Wanderers. It appears from the Arabian narratives that eight persons determined to find the ends of the ocean, and the great western regions. This voyage took place in 1147, and therefore just before that reported to have been undertaken by Madoc. They set out from Lisbon, and kept sailing straight on to the west, in a vast and deep sea, for twenty-three days, when the wind took them southward to Ganam, or Sheep Island. The flesh of the sheep on this island was too bitter to be eaten; but having refreshed themselves at this place, and taken in water, they continued on their course to the south, and arrived among some Red Indians, whose chief persuaded them from pursuing any further the horrors of the gloomy sea which lay to the west. Upon this they returned to Lisbon, having carried their voyage, as is supposed, as far as the Azores, and then southward to the Madeira and Canary Islands. They reported upon their return that they had been visited with a storm, wherein they had lost the light of day, and that beyond them lay darkness and chaos.

Ibn Batuta, who spent nearly thirty years (from 1324 to 1353) visiting various countries from Timbuctoo to the eastern extremity of China, has left an interesting

account of his adventures. Having been despatched from Delhi on a mission to China, he gives the following exaggerated account of the Chinese junks at Calicut: 'The sails of these vessels are made of cane reeds, woven together like a mat; which, when they put into port, they leave standing in the wind. In some of these vessels there will be a thousand men, six hundred of them sailors, and the remainder soldiers. Each of the larger vessels is followed by three others of inferior size. These vessels are nowhere built except in the farthest ports of China. They are rowed with large oars, which may be compared to great masts, over which five-and-twenty man were stationed, who work standing. The commander of each vessel is a great emir. In the large ships, too, they sow garden herbs and ginger, which they cultivate in cisterns ranged along the side. In these, also, are houses constructed of wood, in which the higher officers reside with their wives; every vessel is, therefore, like an independent city. Of such ships as these Chinese individuals will sometimes have large numbers, and, generally speaking, the Chinese are the richest people in the world.'

In addition to the pursuit after land lying at the extremity of Atlantic darkness, a still greater object of curiosity to the Saracens, or Arabs generally, was the seat of Gog and Magog, terms applied to a mighty race of cannibals, supposed to exist on the shores of the Euxine and Caspian Seas, though in the Guildhall of London they stand as mysterious giants, said to be twin-born. These notions are derived from the fancies of the Orientals, who supposed that Gog and Magog had an impregnable castle on the borders of Scythia. As the alchymist sought after the philosopher's stone and the youth-restoring draught; as the astrologer

computed the fortunes of individuals and of states by the aspects of heavenly bodies; as the great mediæval voyagers searched for the fountain of youth in Florida, and as the mechanician passed a lifetime in the search for perpetual motion, so also Arabian navigators were anxious to explore the ideal abode of these monstrous productions of antiquity. But though nothing came of these quests after the unattainable, science was advanced in their vain pursuit, and so the search after Gog and Magog, which centuries ago was a part of the romance of navigation, was indirectly beneficial to nautical science and a knowledge of the world.

Among those who prosecuted this search after Gog and Magog were the governors of Baghdad. They hoped at first to find the residence of these giants on the shores of the Caspian Sea; but having conquered this country without discovering any trace or vestige of the castle of these fabulous beings, they turned to the more southern countries, which were also explored with the greatest care and attention, but without result. Upon this failure they were reduced to excessive perplexity, and, says Edrisi, another exploring party was despatched with strict orders to spare no pains to discover the castle of Gog and Magog. The mission proceeded along the shores of the Caspian, then over a vast desert, after which they met with a stupendous range of mountains, where, according to their report, they actually found the structure of which they were in search. One does not know whether to wonder most at the exuberant imagination displayed in their account of this wonderful castle, or the credulity of their countrymen, who swallowed these lying stories, which were probably invented to prevent any further attempt to penetrate so inhospitable a country. According to these

veracious travellers, the castle had walls of iron, cemented with brass, and was of enormous magnitude. The gates were ninety feet high, and fastened with bolts and bars of a tremendous size, and everything appertaining to this wondrous structure was of similar proportions.

The Arabian authorities were satisfied, and in all the maps of Asia, for ages after, the castle of Gog and Magog appeared at the northern boundary of that continent, on whose confines lie, in Dryden's words:

> 'Those cold regions which no summers cheer,
> Where brooding darkness covers half the year.'

CHAPTER VI.

The Art of Navigation among the Britons—Improvement in Ship-building by Alfred and the Saxon Kings—King Alfred despatches the first English Ship to the Arctic Regions—The Discovery of the Faroe Islands and Iceland by the Norsemen—Discovery and Colonisation of Greenland in the Eleventh Century—Supposed Discovery of America—The Voyage of the Zeno Brothers—The State of Navigation in the Middle Ages—The Genoese and Venetians—The Rise of the Hanseatic League—The Merchant Ships of the Middle Ages—The Introduction of Aids to Navigation.

As the ancient Greeks owed their liberties and very existence as an independent state, to their naval superiority over the Persians, and as the Romans acquired the sovereignty of the ancient world almost as much by their fleets as their armies, so we Britons—who arrogate to ourselves the position formerly held by the latter mighty nation of antiquity, and to which, as regards our pre-eminence as the great colonisers of modern times, we are certainly entitled—owe our proud position as a great power alike in Europe, Asia, Africa, and America, to our preponderance at sea. When, in 500 B.C., the Delphic Oracle was consulted, it advised the Athenians to defend themselves with wooden walls, which Themistocles, with characteristic acumen, interpreted to mean that they were to trust to their ships; so it is that as long as we command the sea, and continue to breed an unrivalled race of seamen, this England of ours can never be relegated to a secondary position in

the councils of Europe, while it guarantees us facilities for the despatch of military expeditions to the ends of the earth such as no other power possesses.

Britain has assumed the proud pre-eminence in navigation once held by the great maritime nations of antiquity. First the Phœnicians brought the commerce of the East for the use of the Western world, and their ships found their way as far to the eastward as Sumatra, and to the westward as the shores of Cornwall. Their capital, Tyre, became for centuries the emporium for all nations, the mountains of Lebanon supplying the timber for building the ships, which were manned by the seamen of the Levant. Then the great Phœnician colony, Carthage, first rivalled and then excelled the opulence and greatness of the mother-country, and her merchant princes sent their fleet along the western coasts of Africa and Europe.

The Greeks excelled in the arts of seamanship and navigation as in all else, though superiority in war chiefly engrossed their attention, and they restricted themselves to the navigation of the seas adjacent to Greece. Their chief rivals for maritime supremacy were the Corinthians and Corcyræans. On the destruction of Tyre* by Alexander the Great, its pre-eminence in commerce was transferred to Alexandria, which became the emporium of trade. When Antony staked and lost an empire at Actium, Egypt became a Roman province, and, under the fostering care of Augustus, the commerce of Alexandria so greatly increased that it became the magazine of Rome, and its merchant princes were

* It may here be noted that in the first unsuccessful attempt to capture Tyre, made by Alexander, the Tyrians employed with great success a fireship. Curtius gives a description of this fireship, which is the first mentioned in history.

not inferior in wealth to the aristocracy of the mistress of the world. At length Alexandria, like its predecessors, Tyre and Carthage, fell from its high estate, though its abasement was neither so overwhelming nor final.

The Saracens, in spite of the Byzantine Emperor, Heraclius, spread over Northern Africa, and ousted the merchants of Alexandria, which remained in a state of decadence until the channels assumed by modern trade, our conquest of India, and the establishment of the Overland route restored to it much of its ancient prosperity. The overthrow of Rome by barbarian races adversely affected the interests of maritime commerce, and retarded the advancement of navigation, which, during the dark ages, was cultivated by the Norsemen, Britons, and Italian Republics of Genoa and Venice. We will now trace the steps by which these races kept alive the nautical spirit that had found its chief exponents in the great nations of antiquity, and induced that desire for maritime exploration which inspired a Columbus to discover a New World, and a De Gama to round the Cape of Storms.

The British ships which vainly strove to oppose the landing of Julius Cæsar were made, says a writer, with bottoms flatter than the Mediterranean vessels, in order to accommodate themselves to a tidal harbour and a shoal coast; and they were elevated both at the prow and at the poop, in order the better to adapt them to resist a stormy sea. They were constructed wholly of oak; the anchors were secured by iron chains, instead of the cable which had been previously used; and the sails were made of skins and thin leather. The elevated poops of the British vessels gave them an advantage over the Roman galleys, by furnishing a higher standing-place,

from which missiles could be directed at the enemy, while their oak timbers afforded a successful resistance to the collision of the beaks of the galleys against their sides. The only way, it is said, in which Cæsar was enabled to capture these vessels was by causing his soldiers to fit sharp bill-hooks at the end of long poles, by which they severed the halliards and other tackle of the sails, thus placing the ships at their mercy. And here we may note that the dexterity of the ancient Britons in the management of their war-ships must have been acknowledged, as we find that on the coins of the Emperor Claudius, Britain is represented with the prow of a vessel at her feet, implying her national symbol, like the lion of Africa and the crocodile of Egypt. Shakespeare also puts into the mouth of an English queen, the defeat of Cæsar's first attempt to land in Britain:

> 'A kind of conquest
> Cæsar made here; but made not here his brag
> Of *came*, and *saw*, and *overcame*: with shame
> (The first that ever touch'd him), he was carried
> From off our coast, twice beaten; and his shipping
> (Poor ignorant baubles!) on our terrible seas,
> Like egg-shells mov'd upon their surges, crack'd
> As easily 'gainst our rocks.'

The swarthy soldier of Rome was succeeded by the blue-eyed Saxon, and again England knew the bitterness of conquest:

> 'From the black coast, that hears
> The German Ocean roar, deep-blooming, strong
> And yellow-hair'd, the blue-eyed Saxon came.
> He came implored, but came with other aim
> Than to protect: for conquest and defence
> Suffices the same arm.'

The Saxon invaders of England had ships made with a wooden keel, the sides being of wicker, with an

exterior of hides. The batswan, or boatswain, had a wand in his hand to direct the motion of the rowers. During the sanguinary conflicts in which the Britons were engaged, first with the Romans, then with the Picts and Scots, and afterwards with the Danes and Saxons, it does not appear that any great change was made in the form or management of their war-galleys. When Alfred the Great had routed some of the Danish invaders, they revenged their defeats on land by harassing the coast of Wessex, in vessels called 'æscs.' The boats of the Danes, ordinarily in use, were broad-bottomed, but, unlike those belonging to the early Britons, their keels were made of light timber, and the sides and upper works were of wicker, covered with strong hides. The æscs were superior to these, and indeed to Alfred's ships, for it is recorded that he ordered the latter to be made twice as long as the former, in order to be placed on an equality with them, and some of his galleys rowed thirty pairs of oars, as did likewise the largest of the æscs.

For a long period the fierce and ruthless Danes harassed the unhappy inhabitants of Britain.

> 'The Danish Raven, lured by annual prey,
> Hung o'er the land incessant. Fleet on fleet
> Of barbarous pirates unremitting tore
> The miserable coast.

The shores of the Baltic Sea, inhabited by these Danes, were parcelled out into a number of petty territories, each of which had its chief or sovereign. When a son of any one of these sea-kings succeeded his father, his brothers had each a vessel given to them, in which they were to seek their fortunes, and under the poetical name of vikings, which may be freely translated into 'pirates,' they became the terror of the surrounding countries. So

hardy and ferocious were they, that it was a proud boast of theirs that they never slept under a roof, and never ate by a fireside. Their vessels used to scour the Baltic and the German Ocean, and bring devastation to all around. The piratical adventurers of the northern coast of Europe, called Northmen and Normans, doubtless advanced the maritime art in the first centuries of the Christian era, and in time lent their assistance as mercenaries to the different governments who sought their aid, or subsidised them in order to escape their exactions. Offa, one of the Saxon kings, got together a very fair fleet, and made himself so formidable, that Charlemagne, King of France, who had been hostilely disposed towards him, sought his friendship and alliance. His successors neglected the fleet, and thus suffered the sea-coast to be harassed and plundered by the Danes ; and the facility with which the latter landed and laid waste the country shows that the English, up to the time of Alfred, in the ninth century, were very neglectful of maritime affairs, which was probably due to the Heptarchy and the consequent internal dissensions which distracted the country.

King Alfred, seeing that the most effectual method of repressing the inroads of the Danes was to meet them on the seas, invited ship-builders from other countries, and made ships larger and stronger than those of the Danes. He also enlisted the services of foreign seamen, whereby the ships were more efficiently manned, and made strenuous exertions to encourage the love of the sea among his own countrymen. The fruits of his patriotic efforts were soon apparent, and, in the year 885, Alfred's navy attacked and destroyed, off the Essex coast, a large Danish fleet. Before his death, Alfred had created a fleet of 120 ships, and we are also told that he greatly

encouraged commerce as a method of increasing the maritime proficiency of his subjects. It is noted as a proof of his attention to nautical affairs that, under his auspices, one Ochter undertook a voyage into the Arctic regions, and made a survey of the coasts of Lapland and Norway. According to the Saxon chronicles quoted by Harris, the learned writer on the dealings of the European States with the East Indies, this great monarch, in the year 883, despatched one of his ecclesiastics, named Sighelmus, 'to carry his alms to the poor distressed Christians of Saint Thomas* and Saint Bartholomew, in the Indies,' supposed to be near Madras. 'The fact,' adds Harris, 'is indeed pretty extraordinary, and if we had not as clear and distinct evidence to support it as any point in our ancient history, I should not have mentioned it; but as the Saxon annals set down this as a passage, and as this Sighelmus did not only perform that voyage according to the instructions of his royal master, but afterwards returned home, and became Bishop of Shireburn, or Sherburn, in Dorsetshire, and left in the treasury of his church, as William of Malmesbury hath recorded, both spices and jewels which he brought back with him out of that country, I see no reason at all to doubt or question the fact.' During the dark ages, however, no attempts were made by the European nations to extend geographical knowledge, which re-

* An old traveller, J. A. de Mandelsloe, says that when the Portuguese first took possession of Cochin and Cannanore, the Christian inhabitants of this coast implored their protection. They affirmed that St. Thomas, one of the twelve apostles, built a chapel here and was murdered whilst at his devotions. Maffens says, by the special command of King John of Portugal, the bones of this saint were transferred to Goa, where a fine church was erected to his memory. On the other hand, Rufinus affirms that St. Thomas suffered martyrdom at Edessa in Mesopotamia, to which pilgrimages used to be made.

mained almost as limited as in the days of Pliny and Ptolemy. The Arabian geographers alone gradually began to acquire information concerning Asia and Africa, but their discoveries were unknown to Europeans, until, some centuries later, a translation of the travels of Abulfeda and Edrisi was given to the world by a French *savant.*

Much encouragement was given to mercantile pursuits by the enactment of a law by Athelstan, that every merchant who set forth three voyages to the Mediterranean, on his own account, should be raised to the honour, and enjoy the privileges, of a gentleman. This law seems to imply that a considerable improvement had taken place in the construction and management of English vessels, and also that there was a marked increase in the mercantile marine of the country. The navy attained still greater proportioms in the reign of Ethelred, surnamed the 'Unready,' who issued an edict that whoever possessed a certain number of hides of land —a hide being supposed to be as much ground as a man could turn up with one plough in a year—should be charged with the building of one ship or galley, and owners of a portion of a hide, a proportionate part. Soon after this, Ethelred attacked the Danes, who were at anchor off the coast of Essex, with a powerful fleet, one of the admirals of which, by the way, was a bishop, and, notwithstanding the treachery of Earl Alfric, who deserted to the enemy, the Danes avoided an encounter, and escaped during the night. However, they fell into the hands of a second British fleet, described by an annalist as belonging to London, which entirely dispersed them, killing many thousands of them, and capturing the flag-ship of the traitor Alfric, although the earl himself escaped. In the year 959, King Edgar, it is said, equipped a fleet of 3000 vessels in order to

defend the kingdom against the Danes. By dividing and stationing this fleet in different parts, he kept the enemy at bay, but, owing to the gradual neglect of these precautionary measures, the Danes, with their king, Sweyn, in the year 1009, were able to land on the English coast, drive Ethelred from his throne, and place their own monarch thereon. The son and successor of the Danish monarch was Canute, of whom the story is told that he gave his sycophantic courtiers a lesson in humility by affecting to command the waves of the sea to obey his pleasure. About this time, the Danes enlarged their open barks of twelve oars into regular vessels of considerable size and strength, many of them being capable of holding 100 men, and some even more. It appears that they had but one mast, which was ornamented with a gilt metal vane under the figure of some bird, to denote the direction of the wind. At the stern were various figures of animals plated with gold and silver.

The ancient English chronicles afford but slender information of the progress of naval architecture and navigation among the Anglo-Saxons; and, though it is probable that but little change was made from reign to reign, an incident in the reign of Hardicanute shows that the art of ship-building had been making some progress. Earl Godwin, having murdered Prince Alfred, son of King Ethelred, in order to appease the anger of Hardicanute, the half-brother of the prince, presented to him a galley sumptuously gilt, and rowed by eighty men, each of whom wore on his arm a golden bracelet weighing sixteen ounces.

Shortly before the Normans invaded Britain, they showed themselves to be powerful rivals, in maritime affairs, to the Southern nations. This was brought about in a way very similar to the establishment of the

Saxon rule in Britain, some centuries before. 'The Normans,' says Sir Walter Raleigh, 'grew better shipwrights than either the Danes or Saxons, and made the last conquest of this land—a land which can never be conquered whilst the kings thereof keep the dominion of the seas.' The Sicilians, being harassed by pirates, called in the assistance of the Normans, who, originally coming from Norway, conquered the north-west portion of France, which they called after them, and, being a robust, hardy, and courageous race, achieved great success in their predatory excursions. The Normans, after assisting the more effeminate Sicilians, afterwards settled amongst them, and, conforming to the habits of the people, ultimately gained great ascendency. They conquered a considerable part of Italy, and then directed their arms against the Eastern Empire. Thirteen hundred Norman knights and 13,000 soldiers, under Robert Guiscard, were transported across the Adriatic, to the Eastern Empire, but the attempt was ultimately unsuccessful. Scandinavia is alike the home of the Norseman and the cradle of freedom. Thomson makes the Genius of Liberty say of the race:

> 'Thence the loud Baltic passing, black with storm,
> To wintry Scandinavia's utmost bound;
> There I the manly race, the parent hive
> Of the mix'd kingdoms, form'd into a state
> More regularly free. By keener air
> Their genius purged, and temper'd hard by frost,
> Tempest, and toil their nerves, the sons of those
> Whose only terror was a bloodless death.'

The Norman invasion of England was effected with 60,000 men, embarked in 3000 vessels, which allowed, on an average, but twenty men to each vessel, so that the dimensions of the latter must have been very small, as the vessels were only used as transports to convey

the army across the Channel, and not as war-ships. The fleet which Harold opposed to the Norman progress appears to have been of a superior class of vessels; but William's plan was to carry on the contest by land, and Harold's fleet failed to bring the invaders to action.

There are accounts extant, due to the researches of the Society of Antiquaries of Copenhagen, of the discovery of the Orkneys, the Shetlands, the Hebrides, the Faroe Islands, and Iceland, by the Norse navigators; and the voyages that led to these great results were undertaken partly with a mercantile view and partly under the romantic, but in those days wide-extended, notion of reaching the regions of the dead and the abodes of bliss, which for countless ages were supposed to lie in the direction of the setting sun—a belief which is still held by the Red Indians of North America.

The Faroe Islands were discovered in the ninth century, and in the year 861, a Norwegian freebooter, who was proceeding thither, was driven by an easterly gale to the westward, and sighted an island, to which he gave the name of Snow-land. Three years after his return, a Swede, by name Gardar Snaffarson, wintered on this island, and gave so flourishing an account of it, that one Flok, or Flokko, a Norwegian, proceeded thither and passed the winter, but was less pleased with it than his predecessor, and gave it the name of Iceland, which it has ever since borne.* In the year 874, it was visited by Jujolf and Leif, and other settlers arrived from Norway, who are said to have discovered wooden crosses, bells, and books, such as were in use in Britain and Ireland, pointing to the island having been inhabited before, probably by settlers from Ireland, though

* See Mallet's 'Northern Antiquities,' and Sir John Barrow's 'Chronological History of Arctic Voyages.'

Forster, in his 'Northern Voyages,' is of opinion that these relics were left by Norman pirates, who had stolen them from that island.

The Icelandic chronicles also relate that the Northmen discovered a great country to the west of Iceland, and, though this account has by some writers been deemed apocryphal, there can be little doubt of its truth, and that the country they discovered was Greenland. Further, that they settled on the shores of Baffin's Bay, and made regular trips to Lancaster Sound and part of Barrow's Strait, is equally probable, as three stone pillars, inscribed with Runic characters, with the date 1135, were discovered in the autumn of 1824, on Women's Islands, in latitude 72° 55′.

Professor Rafn, of Copenhagen, has given in the 'Antiquitates Americanæ,' published by the Society of Northern Antiquaries, the contents of some Gothic MSS., from which, and from the chronicle of Olaf Trygveson (published in 1697, at Stockholm, by Sturlonides), it is established, without reasonable doubt, that not only Greenland but the Continent of America was discovered five centuries before the time of Columbus and Cabot, by Norwegian navigators. In the year 982, Eric Randa, or the Red, being outlawed, set sail from Iceland in search of land, which, according to tradition, had been seen by a countryman, one Gunbiorn, 'when he was driven westward out into the ocean.' The hardy Norseman discovered land, to which he gave the name of Greenland, on the principle that 'if the country has a good name, people will be attracted to it.' And so it proved, for a countryman, Herjulf Bardson by name, proceeded to colonise it, and was followed by his son Biorn, 'who put out to sea,' says the Saga, 'and sailed during three days, until the land was lost sight of under the water;

but then the favouring wind fell, and there arose the north wind and fog, and they knew not whither they were sailing, and thus it went on for many days.' A storm now arose, and the ship was driven far to the south-westward, where Biorn saw a fine plain country covered with wood, but declined to land, notwithstanding the solicitations of his crew. Biorn turned his ship's head to the northward, and eventually reached the promontory where his father dwelt, which was named Herjulf's Ness, and is supposed to be identical with Ikigeit on the coast of Greenland. In the year 1000 Eric's son, Leif, accompanied by Biorn, sailed to explore those lands. The Saga says: 'They came first to the land which Biorn had discovered last. Landing here, they saw no grass. Great mountains there were in the interior, but between the sea and the mountains the land was a stony plain.' This land Leif called 'Helleland,' or 'Stoneland.' Continuing their voyage, they discovered another country, where they landed. This country was flat, and covered with woods, and so Leif called it Markland, from its wood. Again they set sail, and on the second day came to land, to the northward of which was an island. They ascended a river which issued from a lake, and here they resolved to pass the winter. To this place Leif gave the name of Vinland, from its vines. It is conjectured, that Vinland is the country in New England between Boston and New York; that Stoneland is Newfoundland; and Markland, Nova Scotia.

The Norse settlements, on the west shore of Greenland, increased until they consisted of four parishes, containing 100 villages; but the settlers being engaged, says Barrow, in perpetual hostility with the Esquimaux, to whom they gave the name of Skœllings, it would

appear that ultimately they were destroyed; the ruins of their edifices were visible in the year 1721, when the missionary Hans Egede visited and described that country, on its being re-colonised by the Greenland company of Bergen in Norway. The Eastern colony, about the commencement of the fifteenth century, consisted of twelve parishes, with 190 villages and two convents, the whole being under the ecclesiastical government of a bishop, of whom sixteen are recorded in Icelandic annals, to whom and the Holy See the colony paid 2600 lb. weight of the walrus, or sea-horse, teeth. But the communication was frequently interrupted, and at length, in 1406, entirely ceased, from which date nothing more was ever heard of the unfortunate colonists.

The descriptions of Greenland by ancient writers greatly impressed the popular mind, ever prone to superstitious dread of the unknown. Enormous icebergs floated along the coast, and filled every inlet, and the awful appearance of Nature in this desolate part of the world, its remoteness, and the horrors of the stormy seas which intervened, soon made it, in the popular belief, a land of wonders. The surrounding sea was said to be inhabited by marine giants, of both sexes, and the terrific icebergs, as they moved along, were reported to be guided by invisible hands. It was also said that a man named Hollin Geit walked from Norway to Greenland on the ice, conducted by a goat.

The memory of the discoveries made by the Norse navigators was lost until towards the close of the fourteenth century, when Antonio and Nicolo Zeno, two Venetian nobles, were said to have visited the coast of America and Greenland. Their adventures in the northern seas, stated to have been compiled from the

letters * sent by Antonio to his eldest brother, Corto, were first published by Francesco Warutini, in 1558, and afterwards appeared in Ramusio's 'Collection of Voyages and Travels' (vol. ii. p. 220). From these it appears that Nicolo was cast away by a storm on a large island, which he called Frisland, and entered into the service of the king, Zickmni, who placed him in command of a fleet of thirteen ships, with which he conquered several adjacent islands. Antonio joined him, and remained for fourteen years—ten of them alone, and four with his brother. Nicolo proceeded towards the north, and arrived at Engroneland, supposed to be Greenland, and here he died. Soon afterwards Antonio, hearing an account of an island called Estotiland, 1000 miles to the westward of Frisland, which traded with a country to the southward called Dwjis, accompanied Zickmni with several ships in search of it. By many the entire story is disbelieved. Humboldt declares that the narrative has much merit, and the learned John Pinkerton says in his 'History of Scotland,' that 'Zeno's book is one of the most puzzling in the whole circle of literature.' Buache, Forster, and Eggers, identify Frisland as the Faroe Islands;† Malte-Brun‡ con-

* The original 'Italian Letters' with a map, was published in 1380, of which the latest edition, including the original and an English translation, with notes and introduction, is that by Mr. R. H. Major, Secretary of the Royal Geographical Society, published in 1873, for the Hakluyt Society.

† In this they are followed by Mr. Major and Admiral Zahrtmann, but Admiral Irminger, who stayed for a long time in Iceland and the Faroe Islands, is strongly of opinion that Frisland is Iceland, and the Engroneland he identifies with the same island. The editor of the original letters, Zeno the younger, confesses that when a child he had torn many of the letters in pieces, and that the map, when he edited it, was rotten with age. The question is discussed fully by Mr. Major and Admiral Irminger, in vol. xlix. of the 'Journal of the Royal Geographical Society.

‡ See his 'Précis de la Géographie Universelle,' vol. i. p. 405.

siders that Estotiland is Newfoundland, and Dwjis, Nova Scotia and New England. From Icelandic sources, quoted by Admiral Irminger, it appears that the English gained an absolute supremacy in the island about 1400, and for a long series of years continued to illtreat the inhabitants. In 1424, under the leadership of John Percy and others, they plundered, for the fourth time, Bessested, near Reikiavik, and, in succeeding years, burnt churches and carried away cattle, and even many of the inhabitants. The legitimate trade between England and Iceland during these years was considerable; and, in 1413, we find that thirty English fishing-vessels are enumerated as being then at the island. On the 13th April, 1419, no less than twenty-five were wrecked on the coast in a terrific hurricane lasting only three hours.

So gross was the ignorance of geography even among the lettered, that we are told Otho, Bishop of Bamberg, in Bavaria, had never heard of the Baltic Sea, and was vastly surprised, when sailing across it, to find that it was so broad that from the middle of it the opposite shores seemed just like clouds in the horizon. Charlemagne, Emperor of France, anxious to acquire some knowledge of the world, of which he ruled so large a proportion, caused to be constructed a large table of silver, on whose surface was engraved a map of the world as then known; but his grandson, Lothaire, in the war which he waged with the other Carlovingian princes, used this precious and expensive chart of the earth for his more immediate necessities, so that, as has been quaintly observed, 'the silver world was soon melted down to supply the necessities of one of its kingdoms.'

In the dark ages, when all the arts of civilisation

declined, the practice of navigation and the art of ship-building in Europe does not seem to have advanced beyond the state in which it was left by the Carthaginians, when their country was finally depopulated by the Romans, and, about the year 800, maritime affairs had sunk to so low an ebb, that the only navies worthy the name were the galleys of Venice and the vessels of the Saxons and some of the northern nations. The Eastern Empire, the Frankish Empire, under Charlemagne, the Saracens, and other nations, were now so busily occupied in military affairs, that they had neither time nor treasure to augment and maintain their fleets.

It has been observed that had the founder of Islam turned his attention to naval affairs, he might have made a complete revolution in the mode of constructing and managing ships, and in the political condition of the globe, from the enormous power which gradually accumulated in his hands. Mahomet, however, propagated his creed by armies, and, beginning from Mecca and Medina, his religion was spread by the sword throughout the neighbouring countries of Syria, Persia, Asia Minor, and Egypt, even to the pillars of Hercules. But as Charnock observes, in his 'History of Marine Architecture:' 'The collection of an army, more particularly considering the simple state in which military tactics then were, was the operation of a few days, or perhaps only of a few hours. Every peasant could be transformed on the instant into a soldier. He readily became acquainted with all the duties of his profession. The production and plunder of the districts which he overran with religious zeal, and in the inspired hope of obtaining eternal sensual felicity after death, made him totally regardless of his life, and supplied him with

food, as well as with raiment, so that his sword and his Koran became the only necessary articles of equipment for the field of ravage and of glory. A navy was not to be collected by such slender means. Its formation required a species of deliberation that was incompatible with the views of Mahomet and his followers.'

About the ninth century, the Roxolani, or Russians, first became known to the Constantinopolitans, and we are told they brought slaves, furs of every description, the spoil of their beehives, and the hides of their cattle, from the north towards the southern districts by means of river communication. They conveyed these articles of merchandise once a year to Constantinople, by a fleet of canoes, which passed down the rivers flowing into the Euxine Sea, and, in exchange for their cargoes, carried back to their own country corn, wine, oil, and other productions. These yearly visits gave the Russians a thirst for the wealth and luxury which they witnessed at Constantinople, and, in progress of time, they seized by force that which they had previously gained by barter. Twelve hundred of these boats were, in some cases, combined in one fleet, which descended the Borysthenes and other rivers, and landed their men wherever plunder could be obtained.

A great change in naval affairs was effected by the Crusades, which brought into prominence the naval arm, and made it almost of equal importance with the military. Every nation of Christendom was called upon to send its quota of soldiers to the general armament fitted out for the liberation of the Holy Land; but, as Palestine could not be approached by land from Europe, except through the territory of the Eastern Empire, and as the political relations of that empire with

other countries did not always admit of its being made a military road from Europe, it followed that the Mediterranean became the line of passage for the soldiers of the Cross. Not only was a spur given to the extension and improvement of naval operations, but a great development of commercial enterprise by sea was brought about by the Crusades, which threw open the Mediterranean to English commerce, though the great centres of trade with Constantinople and Alexandria continued to be Venice, Pisa, and Genoa, which, intent only on commercial speculation, failed to promote maritime discovery and science. Hence geographical research was carried on by land, and we find that, besides the travels of Marco Polo and of the envoys of Pope Innocent IV. (in 1245) and of Louis IX. (in 1253), despatched into Central Asia, four centuries before their time, in the reign of our King Alfred, two Mohammedan travellers journeyed through India and China. Their travels, which were translated from the Arabic by the Abbé Renaudot, may be found in Harris's 'Collection of Voyages and Travels' (vol. i. pp. 521-46), and are spoken of by Pinkerton 'as not a little curious.' Besides the travels of Masudi and Abulfeda, we have the accounts of the journeys by land and sea of the Chinaman Hiouenthsang, of Soleiman, of the Jew Benjamin of Tudela, and of Ibn Batuta.

It was in the time of Richard I. that there began to be a clear system of English maritime law, and some of the provisions of these early codes, called the laws of Oleron, became the common usage of maritime states, whose vessels passed through British seas. We find regulations as to stowage and delivery of goods, stoppage of sailors' wages for disobedience of orders, branding in the face for desertion, and penalties for incompetence. If a

seaman fell sick he was to be sent on shore, with a ship's boy to attend upon him; and if he gave the lie to another at a table where there was wine and bread, he was to be fined four deniers, from which we may gather that the manners and language of the forecastle were more moral and choice than, we fear, they can be said to be in these degenerate days. Again, if a difference arose between a master and a seaman, the former was to deny the latter his mess thrice before he turned him out of his ship. A pilot stranding a vessel was to lose his head if he had no means to make good the damage, and pilots who, in 'connivance with lords on the coast,' ran a ship ashore, were 'to be hung on high gibbets near the place where these accursed pilots brought the ship to ruin;' while, as for the wicked 'lord of the coast' who made money by wrecking, he was to be 'tied to a post or stake in the midst of his own mansion-house, which, being fired at the four corners, all shall be burnt together, and the place converted into a market for hogs.' The more ordinary sort of wreckers, denounced as 'more barbarous, cruel, and inhuman than mad dogs,' were to be ducked in the sea till they were half-dead, and then drawn out and stoned to death. Among other barbarous articles contained in the 'Black Book of the Admiralty' were the following: 'Whoever draws a sword upon the master of a vessel, or wilfully falsifies the compass, shall have his right hand nailed to the mast. Whoever behaves riotously shall be punished by being keel-hauled. Whoever is guilty of rebellion shall be thrown overboard.'

The reign of Edward III. marked another stage in English commerce, with the opening of the Newcastle coal-fields, though a royal edict prohibited the use of coal in London while the queen resided there, in case it

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by 'a triple mark of three small plates of iron fastened upon a particular line on each side of the hull;' and in Sardinia the centre of a painted ring was the limit. The Mediterranean seamen of the Middle Ages had their sea-serpent, a monster with a mitre on his head and a dalmatic robe across his shoulders, who, it was well attested, once swallowed a sailor who had defied the Virgin Mary while throwing the dice, an occurrence which led to a law prohibiting the playing of such an unlucky game on board ship.*

After the decline of Norman supremacy in the Mediterranean, the republic of Venice came into prominence as the greatest nautical power of the age. Venetia was anciently a province on the eastern coast of Italy, containing upwards of fifty cities; but when the barbarians, under Alaric, king of the Goths, and afterwards under Attila, king of the Huns, overran Italy, the Venetians fared miserably, and were driven from their homes and their country. They retired to a cluster of small islands, seventy-two in number, situated in the Adriatic Sea, and there gradually formed a community which, in process of time, almost ruled the sea, although for a long period they had no fence against its encroachments but hurdles, no other food than fish, no wealth besides their boats, and no merchandise but salt. The extent of the commerce of Venice in Shakespeare's time is denoted in that passage in which Shylock says of Antonio's ventures: 'He hath an argosy bound to Tripolis, another to the Indies; I understand, moreover, upon the Rialto, he hath a third at Mexico, a fourth for England.' Thus, by trade, arose Venice, the Queen of the Adriatic:

> 'The seeming God-built city! whichmy hand
> Deep in the bosom fixed of wondering seas.

* See Lindsay's 'History of Merchant Shipping.'

Astonish'd mortals sail'd with pleasing awe,
Around the sea-girt walls by Neptune fenced,
And down the briny street; where on each hand,
Amazing seen amidst unstable waves,
The splendid palace shines; and rising tides,
The green steps marking, murmur at the door.'

The islands, on which these enterprising fishermen founded a great State were marshy, and separated only by narrow channels; but they were well-screened, and almost inaccessible. It appears that the Veneti (not to be confounded with the Veneti of Gaul, mentioned by Cæsar), or Venetians, did not think of making a permanent residence in these islands, each one of which was for many years governed by its own chief, and formed a distinct State.

When their commerce and foreign dealings had made them objects of jealousy to foreign states, they thought of combining for mutual safety; and this union was first begun in the sixth century of the Christian era, and completed in the eighth. Their fleets, in the course of time, visited all the ports of the Mediterranean and Egypt, and other places to which the produce of the East was usually brought.

When the Venetians, by enterprise and perseverance, became a commercial people, they sent out galleys to accompany and protect their merchant ships. These galleys, we are told, were often luxuriantly fitted up, and near the bows was erected a platform, on which the soldiers were stationed, armed with bows and arrows and other arms. No other fleets were found so capable of conveying the vast armies of the Cross to the Holy Land, as those of Venice, which, in consequence, were much benefited by the employment. Under Vitalio Micheli, the thirty-third Doge of Venice, says a writer, a naval

armament was fitted out from Venice for the service of the Crusaders, which showed the power and wealth of that community. Two hundred galleys were prepared, which, after vanquishing the fleet of the neighbouring Republic of Pisa, attacked Ascalon in Syria, and captured it, as well as other towns. Under the next two Doges, Ordelapho Faliero and Domenicho Micheli, similar armaments were fitted out, and met with so much success on the eastern shores of the Adriatic, on the coast of Africa, and in the Holy Land, that the envy of the Greek emperors was excited, and a series of fierce engagements took place between them.

In the time of the Doge Sebastian Ziani, about the year 1177, an event occurred which led to the Venetian ceremony of the 'Doge marrying the Sea,' which has its religious counterpart in the Greek Church in the annual ceremony performed at St. Petersburg and Belgrade, of the Primate of those cities blessing the waters of the Neva and of the Save. Pope Alexander III. being threatened with a hostile attack from Frederick Barbarossa, solicited the aid of the Venetians, which was afforded; on which Barbarossa sent a fleet of seventy-five large galleys, under his son Otho, to attack Venice, but the attempt utterly failed, and forty-eight of Otho's galleys were either sunk, captured, or destroyed. In order to signify his gratitude to the Venetians, Alexander presented the Doge with a ring, and accompanied it with these words, 'Take this ring and present it to the sea, in token of your dominion over it; enjoin your successors to perform annually the same ceremony, that succeeding ages may learn that your valour acquired this prerogative, and has subjugated the ocean, even as a wife is subject to her husband.' This custom of the 'Doge

marrying the Sea,' was continued yearly for many centuries after this event. On Ascension Day in each year, the Doge, the senators, and persons of quality, together with the foreign ambassadors, entered a splendid vessel, called the *Bucentaur*, which was fitted with great elegance for the ceremony of marriage. It was gilt from the prow to the stern, and was covered overhead with a kind of tent, or awning, made of purple silk. When all the companions of the Doge had sailed out into the open sea in their gondolas, following the *Bucentaur*, the Doge threw a gold ring into the waters, saying—'We marry thee, O Sea, in token of that true and perpetual dominion which the Republic has over thee.' The word *Bucentaur* now rather recalls to British minds the name of Count Villeneuve's flagship at the battle of Trafalgar:

> 'The spouseless Adriatic mourns her lord;
> And, annual marriage now no more renew'd,
> The *Bucentaur* lies rotting unrestored,
> Neglected garment of her widowhood.'

In gratitude for the services which the Venetians rendered him, Baldwin, Earl of Flanders, on being chosen emperor, gave them great privileges in his empire, and permitted them to acquire by conquest the Greek islands in the Archipelago. Not only did the Venetian State engage in this attack on the islands, but private individuals formed themselves into companies for the same purpose; the terms on which they co-operated being that every person whose property amounted to a certain sum, should furnish a ship of a given description and force, and by a proportionate scale, that those who were more or less wealthy should furnish a quota according to their means. As the

expense thus became a general, though private, concern, the profits resulting from it were proportioned according to each one's contribution. The result of these expeditions was, that the whole of the Greek islands became subject to the Venetians.

Shortly after this period hostilities broke out between the Venetians and the Genoese, who had risen to greatness and now divided the empire of the narrow seas with the Queen of the Adriatic. Thomson makes the spirit of liberty speak of Genoa :

> 'There in white prospect from the rocky hill
> Gradual descending to the shelter'd shore,
> By me proud Genoa's marble turrets rose.
> And while my genuine spirit warm'd her sons,
> Beneath her Dorias, not unworthy, she
> Vied for the trident of the narrow seas,
> Ere Britain yet had open'd all the main.'

Jealous of the commercial greatness of her rival, Genoa conspired with the Greeks, under the command of Michael Palæologus—who were disaffected, after the partition of the Grecian States, in 1104, by the leaders of the fourth crusade—and drove the Venetian merchants from Constantinople, thus securing the entire commerce by the Black Sea, and the inland trade with India. Their endeavours to share with their Venetian rivals the trade with Egypt, gave rise to a series of wars, during which many sanguinary battles took place, notably the great defeat of the Venetian fleet on the 8th of September, 1298, in which the Genoese took eighty-five ships and 7400 prisoners, among whom were the admiral and many persons of distinction, including the famous traveller, Marco Polo, who were set at liberty on the conclusion of peace in the latter part of the following year. Finally on the 24th June, 1380, by the surrender

of Chioza,* which had been desperately defended by Doria, who was killed, the Genoese power received a fatal blow from which it never recovered. The glory of Venice also has long since set. What she was and now is, is best expressed in the eloquent words of the noble poet who loved Italy and died in the cause of Greece:

'She looks a sea-Cybele, fresh from ocean,
Rising with her tiara of proud towers
At airy distance, with majestic motion,
A ruler of the waters and their powers.
And such she was;—her daughters had their dowers
From spoils of nations, and the exhaustless East
Pour'd in her lap all gems in sparkling showers.
In purple was she robed, and of her feast
Monarchs partook, and deem'd their dignity increased.'

Though there does not appear to have been any great improvement in the construction of the vessels during the period of active warfare, the people of Venice and of Genoa are entitled to the credit of furthering the progress of navigation at a time when the navy of England was in a very feeble condition, and the English were supplied by the Venetians with articles of foreign produce. Sir William Monson, a gallant and skilful seaman, who lived in the reign of Queen Elizabeth, says: 'The Venetians engrossed the whole of the trade upon those seas, and furnished us with the rich merchandise of Turkey, Persia, and India at what rate they pleased. The Venetians sent yearly their argosies to Southampton, which town enjoyed a charter from the kings of this land, which was wrested out of their hands by the Earl of Leicester, to the utter decay of that town; and the argosies since then have become strangers in England,

* An account of the final struggle ending at Chioza may be found in a work by Daniel Chinazzo, who was in Venice at the time.

which my eyes were witnesses to in the month of October, 1587.' Sir William Monson then recounts how the last of these ships, being 1100 tons burden, and richly laden, was piloted to the shores of England by Forster, an English navigator, and on approaching the Isle of Wight, the passengers, being desirous of landing at Southampton that night, compelled Forster, against his urgent remonstrances, to pilot the ship through the Solent, when the ship was lost on the Needles, 'where she, her goods, and company, except seven poor creatures, perished.' He continues: 'We may reckon from this time the decay in matters of Venetian trade, for argosies, which were wont to visit us, are now unknown to us, and we possess the wealth they were wont to reap. The commodities of Persia and the East Indies are brought by ourselves, in our own vessels, direct from Turkey, where we have obtained as great a freedom as we can desire. Such places as the Venetians were wont to take freight in their ships to transport from port to port, now we absolutely enjoy that privilege, for all strangers are more desirous to put their goods into English bottoms than theirs.'

Thus, before the first voyage made to the East Indies by the English ships, under Captains Raymond and Lancaster, in the year 1591, which had a disastrous issue, and the establishment of the East India Company in the last year of the century, the products of the East, conveyed thence by way of Trebizond, Damascus, and Aleppo, and distributed to England, Germany, the Netherlands, and the Baltic, as well as the Mediterranean States, by the ships of Venice, Genoa, and Pisa, were carried in English bottoms, and the direct trade with Turkey, by the Levant, which became so lucrative, was definitely established. After the desperate struggles

between the Venetians and Genoese, a new naval power sprang up in the kingdom of Arragon, which occupied a considerable part of Spain, Castile being the other part. The Arragonese soon acquired great influence in the Mediterranean, but it does not appear that either the form of their vessels, or their mode of navigation, presented any variation from those of the Genoese or Venetians.*

It is mentioned as a remarkable instance of the slow growth of naval power among a military people, that the great Tamerlane, or Timour Lung (the lame), although he possessed all the country from the Volga on the north to the Persian Gulf on the south, and from the confines of China on the east to Damascus on the west, could not cross the Bosphorus† into Europe

* Intimate relations sprang up between the Porte and the British Government, in the reign of Queen Elizabeth, who, in courting the favour of the 'Grand Seignior,' as he was then called, had in view the double object of making him an additional bulwark against the aggressiveness of Spain, and to encourage the Levant trade. The first ambassador Elizabeth accredited to the Sultan was Sir Edward Barton, who accompanied the victorious Padishah in his war against Hungary, where he contracted a fever which proved fatal. Sir Edward found a last resting-place in the island of Halki, one of the Prince's Islands in the Sea of Marmora; and a marble slab on his tomb describes him as a man illustrious for his worth and talents.

† Much learning has been expended in endeavouring to account for the origin of the name 'Bosphorus,' which, in Greek, signifies the passage of the ox. The ancient poets assert that it was so called from the metamorphosis of Io, the daughter of Inachus, who, unable to bear the sting of the wasp with which Juno tormented her, plunged into the straits and thereby gave name to it. Arrian accounts for that name by the fall of a cow which guided the Phrygians across the canal. Another explanation offered is, that when the ancient inhabitants passed over they used a craft drawn by oxen, and that the custom gave rise to the name. The Turks have different denominations for this strait; Boghaz ichy, the middle of the throat or shoulders, and Istambol Bogharzy, the throat of Constantinople, are derived from a fancied resemblance between the strait and that part of the human body, a

on account of his not possessing a single galley. Had it been otherwise, the destinies of Europe, and indeed of the human race, might have been changed, for the hordes of Timour would have speedily overrun Europe, from the Levant to the British Channel. As the Greeks of the Eastern Empire joined with the Turks of Asia Minor in preventing Timour from hiring any vessels, he was forced to abandon an intended attack on Constantinople, which, in 1453, fell to the arms of Mahomet II., founder of the Osmanli dynasty in Egypt, when the Eastern Empire became extinct. Before this date, the Turks had fixed the seat of their empire at Adrianople (so called by the Romans after their emperor), on the site of Orestias, the capital of the kings of ancient Thrace. In the course of the operations resulting in the capture of Constantinople, a remarkable stratagem was adopted by the Turks to bring their slender fleet near its walls without encountering the superior naval force of the Greeks. Gibbon thus describes it: 'The genius of Mahomet conceived and executed a plan of a bold and marvellous cast, of transporting by land his lighter vessels and military stores from the Bosphorus into the higher part of the harbour. The distance is about ten miles; the ground is uneven, and was overspread with thickets. A level way was covered with a broad platform of strong and solid

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resemblance which the Greeks were the first to imagine. Its most significant name, however, is that given it by Euripides, the Key of the Pontus Euxinus, since the inhabitants on its borders had the power of closing it like a door, and thereby of interrupting the passage into the Black Sea. The Hellespont, now known as the Dardanelles, derived its name from Helle, daughter of Athamas, King of Thebes, who, with her brother Phryxus, was wrecked while attempting to cross it in a ship called the *Ram*, fourteen centuries before the Christian era, and about 150 years before Tyre, the Phœnician capital, was founded.

planks, and, to render them more slippery and smooth, they were anointed with the fat of sheep and oxen. Fourscore light galleys and brigantines, of fifty and thirty oars, were disembarked on the Bosphorus shore, arranged successively on rollers, and drawn forwards by the power of men and pulleys. Two guides or pilots were stationed at the helm or prow of each vessel; the sails were unfurled to the wind, and the labour was cheered by song and acclamation. In the course of a single night this Turkish fleet painfully climbed the hill, steered over the plain, and was launched from the declivity into the shallow waters of the harbour, far above the molestation of the deeper vessels of the Greeks.' Shortly after the capture of Constantinople by the Turks, the Venetians attempted to dispute the possession of the islands in the Mediterranean with them. But, though her navy was superior, she met with but indifferent success, and Venice did not long maintain the proud position she once occupied among the Mediterranean States.

In the year 1241—others place it at 1164—was founded a maritime power for commercial purposes, known as the Hanseatic League, which numbered seventy-two towns, including the free cities of Bremen, Lubeck, and Hamburg, and traded with Venice for Eastern commodities by an inland route by the Rhine. Of these Hanse Towns and their freedom-loving citizens, the Spirit of Liberty says in the words of the poet:

> 'I waved my course
> O'er vast Germania, the ferocious nurse
> Of hardy men, and hearts affronting death.
> I gave some favour'd cities there to lift
> A nobler brow, and through their swarming streets,
> More busy, wealthy, cheerful, and alive,
> In each contented face to look my soul.'

The fighting ships of this alliance, for the mutual protection of the freedom of trade from the exactions of the robber princes and potentates of the north, not only ruled paramount in the Baltic and German Ocean for more than two centuries, but dethroned the Kings of Denmark and Sweden, and reduced Norway to subjection. In course of time as each community, or nation, conducted its own defence afloat as well as ashore, this association was dissolved. And here we would observe that, in histories of the Middle Ages, too little is said of the influence which was exercised by the trader, for even in the Dark Ages the commercial instincts of the nations of Europe were more developed and exercised a greater influence on political events than they are credited with. Every movement was not due to the initiative of the sovereign, the soldier, the statesman, and the ecclesiastic, but the humble merchant also had his share in moulding the destinies of nations. Even the Crusades were not entirely attributable to the fiery appeals of Peter the Hermit, addressed to the fanaticism and religious enthusiasm of Christian nations, or the longing for adventure so characteristic of the Norman race.* This phase of these religious wars escaped the discriminating view of Gibbon in his great work, the 'Decline and Fall

* French historians have more particularly described the commercial aspects of the Crusades. Thus, M. Perin has written on this subject in his 'De la Richesse dans la Société Chrétienne,' and M. Michaud has devoted to it two chapters in his 'Histoire des Croisades.' In the ninth century, Venetians, Genoese, and merchants of Pisa, Amalfi, and Marseilles had counting-houses in Alexandria, in other maritime towns of the Levant, and in Jerusalem itself. It was the derangement of this trade, says Finlay, caused by the conduct of the Seljouk Turks, which determined many to take the Cross. The yearly fair held at Jerusalem was in danger of being closed, and the trade between the East and the West, as far as it was likely to be allowed to continue at all, of becoming a monopoly of the Greeks.

of the Roman Empire;' but it has been recognised by the late Mr. George Finlay, in his very valuable 'History of Greece.'

This able writer also gives an account of the Maona of the Giustiniani, a famous trading company of Genoa, which bears a singular resemblance to our East India Company. The following briefly are the circumstances attending the rise of this corporation. In the year 1346 an expedition against the declining Byzantine Empire was fitted out by the Republic of Genoa, at a moment when the public treasury was entirely exhausted. The funds for starting the expedition were raised by private persons, who subscribed the money in shares. The Republic pledged itself to secure these citizens against all loss, and mortgaged a portion of the annual revenue to pay the interest on the money advanced. Chios and Phocæa were conquered, but when Vigniosi, who commanded the expedition, returned to Genoa, he found that the State was unable to refund the expenses. He then concluded a convention between the subscribers and the Government, by which the former was constituted into a joint-stock company, and recognised as the proprietors and governors of the Island of Chios, under the suzerainty of Genoa, for a period of twenty years. During that time, the Republic of Genoa reserved its right to assume possession on payment of an adequate sum of money. The Republic, however, was not able to pay its debts, and the shareholders of the company acquired the right to administer the revenue of Chios. Their Government lasted for upwards of two centuries, and was remarkable for the excellence of its administration, and its comparative freedom from oppression.

From the evidence of English coins, it appears that the

vessels employed in the fifteenth century, under the name of ships, were much shorter than the ancient galleys, and their sterns and prows were considerably more elevated above the surface of the water, the vessel assuming much the contour of a half-moon. The masts were, generally speaking, single, and seldom, if ever, exceeded two in number; and the sails were all square, and the yards lowered down on the deck when the vessel was brought to an anchor. The outside planks were fastened to the frame by iron nails, and were not set edge to edge, but lapped one over another, called 'clinker' built, to distinguish it from the other system, called 'carvel' built, with a sufficient caulking between them to keep out the water. In other respects, the ships greatly resembled the Mediterranean galleys.

During the fifteenth century, says a writer, the ancient galleys were superseded by what were termed galleons, which had a greater freeboard than the former, partly in order to allow room for the portholes for the cannon, when that description of arms came into use. When carrying up the sides of the vessels to a greater height, they were inclined inwards, so that the deck was considerably narrower than the hold, thus causing the vessel to assume a clumsy appearance, as may be seen in representations of vessels of those times. The galley, the galleon, and the galleass, had certain distinctive characters peculiar to each. The galley bore a strong resemblance to the rude vessels of earlier ages, so far as form was concerned, and when cannon were introduced upon them, they were placed upon deck, and simply fired over the side of the ship. On the 'coursey,' as it was called, the soldiers stood, and the mariners passed to and fro. The rowers sat on deck, four, five, or six, chained to an oar fifty feet in length, to which were fixed

wooden handles small enough to grasp. There was little or no bulwark; the vessel was low, and the sea continually washed over her, but the deck sloped away from the 'coursey' to the sides, so as to admit of the water running off. These galleys were generally rigged with three masts carrying lateen sails.

The galleasses are described by a contemporary writer 'as the greatest of all ships that have both sails and oars; they are long and narrow, and have the same gear and build as a galley. They carry as many oars as the ordinary galley, but the oars are placed further apart, the galleass being about a third larger than the galley, and also a third broader and higher. The oar is bigger, and requires seven men at the least to manage it. The galleass carries three masts, mainmast, foremast, and mizzen, and three sails. It has a rudder and two broad oars at the stern to help the rudder. It is somewhat cumbrous. There are platforms at the poop and prow for soldiers and artillery. The bulwarks are high and fixed, and pierced with loopholes, through which the soldiers fire their muskets and arquebuses without being seen by the enemy. There are courseys from stem to stern, on which the soldiers stand to fight, or lie down to rest; and there are commodious cabins beneath the deck.' The galleass, which carried guns on the broadside between the oars, of which there were three tiers, or banks, was much larger and broader than the galley, and was furnished at the head and stern with a heavier battery of guns. These vessels, which were peculiar to Venice, were sometimes above 150 feet long, and more than thirty wide; on their three masts they carried sails of a triangular form.

The galleon, which was used solely for commercial purposes, differed both from the galley and the galleass,

in being without oars, the motive power being sails only, and the sides 'tumbled in' from the water's edge, to use a nautical expression, a feature which was apparent in our ships of war until the eighteenth century.

Galliots differed little from galleys, except that they were smaller and without raised platforms. They had from seventeen to twenty-three benches for rowers, generally one mast and only one deck. Brigantines were smaller than galliots, and varied from them in that the 'coursey' was less elevated. They carried one sail, and from eight to sixteen benches, with one rower to each oar. Frigates, which are frequently mentioned in accounts of naval actions fought by the East India Company's ships with Portuguese vessels of war in the East Indies, were galleys of smaller size than brigantines; but some were decked and some not. They had from six to twelve oars, and one mast. Pinnaces were oared boats of various size, from ten to about a hundred tons burden, and sometimes had three masts. It is said that guns were first placed between the rowers on board of galleasses at the great battle of Lepanto, fought on 7th October, 1571, a battle not less celebrated and important in its results than those of Actium and Trafalgar.

The bowsprit was first employed in the reign of Henry VI., when four masts were sometimes used, having a sail to each, and, soon after, the fighting-ships were fitted with a forecastle forward, and a cabin at the stern. The largest ships that were managed by sails, were called carracks.

The first British trading-vessel of large size was built at Hull in the year 1449. In 1474 we read of two ships at Bristol, one of 500 tons burden, and the

other of 900. Such large vessels did not usually belong to one person, but several parties would engage in a trading venture, of which parties the Government often formed one. Before the practice of marine assurance reduced the hazard of the sea to almost arithmetical certainty, it was more necessary than now for ship-owners to divide the risk by holding shares in several vessels rather than embarking too much of their capital in one bottom, and as early as the year 1100 we find a half-share of one vessel, and a quarter of another, held by Godrick, a native of Walpole, in Norfolk. The celebrated Whittington, who lived in the reign of Henry IV., at the beginning of the fifteenth century, appears to have been a successful mercantile speculator, whose ship was named *The Cat.*

Commerce now began to engross more of the attention of maritime people, and the progress of discovery opened a road to the introduction of Europeans to nations and countries before unknown. During these ages also the missions undertaken to different parts of the world, by land and sea, in order to convert the natives to Christianity, conduced to the general improvement of the human race. The expeditions of travellers promoted the same beneficial end, and particularly the journeys of that most remarkable of all travellers, Marco Polo, the Venetian, who, born in 1251, journeyed over Asia, from the Hellespont to the wall of China, for twenty-six years, seventeen of which were passed in the service of the Mongul Emperor of China. Marco Polo brought home varied information respecting the different countries of the East, which, being of a novel and wonderful character, was in a great measure disbelieved, and even burlesqued in the comedies of the times, though, as in the case of Bruce and other travellers,

succeeding visitors have confirmed the truth of his statements respecting the countries and peoples of the East, and only recently Mr. Baber, in his report of the Grosvenor Mission, certifies to the correctness of the great traveller's account of Yunnan. Marco Polo returned to Venice in 1297, and two years later, when a prisoner in the hands of the Genoese, dictated the account of his travels and discoveries to one Rustigielo, of Pisa. Editions of this work were published at Venice in 1496, at Trevigi in 1590, and an inaccurate and mutilated translation of the original manuscript, in Latin, towards the end of the fifteenth century, by Pepuri, a Dominican friar, of which Ramusio published a translation in his 'Collection of Voyages and Travels.' In more modern times, editions of Polo's travels have been published in most European languages, but it was reserved for that eminent scientific geographer, Colonel H. Yule, C.B., R.E., to produce an edition enriched with notes and commentaries, which will ever remain a monument to his own erudition and research, no less than to the pre-eminence of the greatest citizen of Venice.

The mariner's compass, which is believed to have been first introduced into Europe at the commencement of the fourteenth century, gave a great impetus to nautical research, for by its means the sailor was enabled to venture without fear into the open sea, which was thus robbed of half its terrors. Some attribute the honour of its invention to Flavio Gioia, of Amalfi, in Campania, though it was doubtless long before known to the Chinese. However, it is certain that the common introduction into Europe of the mariner's compass dates from the year 1420; and the discovery of the variation of the compass needle from the true point, which was early observed by the Chinese, is claimed by

both Columbus and Sebastian Cabot. At this time the plane chart was the only one in use, but, in the year 1545, two Spanish treatises were published by Pedro de Medina and Martin Cortes, which contained a complete system of the art of navigation as then practised. Medina's book was translated into Flemish, French, and Italian, but Cortes' was the favourite guide among English navigators, into which tongue it was translated in the year 1561, the system hitherto in use being that of Ptolemy. In 1530, Gemma Frisius invented the nautical quadrant, and, seventeen years later, Pedro Nunez, or Nonius, published a book exposing the errors of the plane chart, and invented a method of dividing a quadrant by means of concentric circles, which was improved by Halley, and is known as the 'Nonius.'

In the year 1577 William Bourne published his treatise on navigation, and, in 1599, Simon Steven issued, at Leyden, his work, known in its English translation as the 'Haven-finding Art,' in which the method of estimating the speed of a ship by a 'log' is described. Michael Coignet published a treatise on navigation, at Antwerp, in 1581, and the same year the dipping-needle was discovered by Robert Norman.

Though Gerard Kremer,* commonly known as Mercator, published his map on the principle known as 'Mercator's Projection,' in 1569, it was not until the year 1592 that its utility found acceptance, and this was chiefly due to Edward Wright's famous 'Correction of certain Errors in Navigation.' Other works were published, in 1608, by Simon Steven, and in 1624 by

* Kremer, or Mercator, was born of German parents in Flanders in 1512, settled at Duisburg at the age of forty, and died there in 1594. The first stone of a monument to his honour was laid in 1869, but lack of funds delayed its completion until September, 1878, when it was publicly unveiled.

Snellius; and the invention of logarithms, by John Napier, of Merchiston, was of the greatest use to navigation. Gunter also constructed his scale, and, in 1657, Norwood published his 'Seaman's Practice,' and also a manual called the 'Epitome.' In 1620 William Johnson wrote his 'Light of Navigation;' but, more than to any one, the exposition of the true principles of the art is due to Wright, while many other Englishmen gave valuable co-operation, chief among whom was Bond, who, in 1645, published in Norwood's 'Epitome' an improvement of Wright's method. During the last and present centuries new works have been written by those standard authorities, Mackay, Norman, Riddle, and Norie.

For nearly two centuries, British shipping was subject to what were known as the Navigation Laws. These enactments, due to legislation of a protectionist character, were doubtless of service in their day, but at the date of their abrogation, in 1846, had ceased to serve any useful object. Though the repeal of these laws was strenuously opposed, and the worst consequences were predicted, experience has shown that they were prejudicial to the interests of commerce. England has made greater progress during the last thirty-five years than in the preceding century. Her vast mercantile marine, her illimitable commerce, and her magnificent Colonial Empire make her the wonder and envy of nations. Pope's lines, though written of the England of Queen Anne, apply with greater truth to the England of Queen Victoria:

> 'There mighty nations shall enquire their doom,
> The world's great oracle in time to come,
> There kings shall sue, and suppliant States be seen
> Once more to bend before a British Queen.'

CHAPTER VII.

Prince Henry the 'Navigator,' and Portuguese Maritime Research—Discovery of the Islands and Capes of West Africa—The Legend of Prester John—Further Discoveries on the West Coast of Africa—Diaz rounds the Cape of Good Hope.

MARITIME discovery in the Middle Ages is most indebted to the Portuguese, among whom its chief patron was Prince Henry, surnamed the 'Navigator,' son of King John I., whose discoveries have found an able historian in Mr. Major, while his praises have been sung by an English poet, Bowles, in the following lines:

> 'Henry, thy ardent mind first pierced the gloom
> Of dark disastrous ignorance that sat
> Upon the southern wave, like the deep cloud
> That lowered upon the woody skirts, and veiled
> From mortal search, with umbrage ominous,
> Madeira's unknown isle. But, look! the morn
> Is kindled on the shadowy offing; streaks
> Of clear cold light on Sagres' battlements
> Are cast, where Henry watches, listening still
> To the unwearied surge; and turning still
> His anxious eyes to the horizon's bounds,
> A sail appears, it swells, it shines; more high,
> Seen through the dusk, it looms, and now the hull
> Is black upon the surge, whilst she rolls on
> Aloft, the weather-beaten ship, and now
> Streams by the watch-tower!'

In the early part of the fifteenth century, John I., King of Portugal, had effected some important conquests over the Moors, in which he had been very materially

assisted by his fifth son, Prince Henry, who, however, rather delighted in the more beneficent glories of learning and science than the fame of war. Upon the cessation of hostilities, he retired to the promontory of St. Vincent, and lived at the seaport town of Sagres, which he had himself founded, where he cultivated the science of astronomy, for the purpose of making it available to the mariner in guiding him over the ocean. Prince Henry established a naval college and an observatory; he called to his assistance all the most scientific men of his time, and the point to which he especially directed his attention, was the practicability of sailing round Africa, and of thus reaching the East Indies. His ideas respecting the accomplishment of this project had received their first impetus while engaged on active service against the Moors, by intercourse with some well-informed persons at Ceuta, on the African coast, opposite to Gibraltar.

Africa, of the three continents known to antiquity, was least traversed, and its deserts were invested with special terrors to the ancients, since the terrible catastrophe which overtook a portion of the army of Cambyses, when, while attempting a passage to one of the oases, it was overwhelmed by a sandstorm, and 'only a moment interposed between the appearance of a pompous army and that of a hill of sand, which covered for ever the joyous and victorious battalions.'

Though Prince Henry prosecuted his nautical labours for a period of more than forty years, he did not live to see his views accomplished in their entirety; but the discoveries which were effected under his auspices were many and important, and from that day nautical research has been prosecuted with unflagging energy, not only by the Portuguese and Spaniards, but by their suc-

cessors in maritime supremacy, the French and English. All the geographical knowledge respecting the earth was brought together, and recorded in maps drawn under his superintendence; charts were also constructed, and the rocks, coasts, and quicksands were all noted down. In the year 1485 was invented and brought into use the astrolabe (derived from two Greek words meaning to 'take the height of the stars'), and the original of the quadrant:

> 'That sage device, whose wondrous use proclaims
> The immortal honours of its authors' * names.'

We will give a brief account of the successive steps by which this truly great prince, to whom has justly been given the name of the 'Navigator,' extended our geographical knowledge, and gave the impetus to maritime discovery which resulted, in the last decade of the century, in what may be regarded as, perhaps, the greatest achievements of all time—the discovery of America by Columbus, and the voyage to the East Indies by De Gama.

Having purchased the right of the King of Castille over the Canaries about the year 1406, Prince Henry sent Ferdinand de Castro, Master of his Household, to take possession of them, and, four years later, began to fit out ships to explore the African coast.

The knowledge of the ancients did not extend beyond Cape Blanco, in lat. 33° 8′ N., and the westernmost Cape of Africa known in those days, situated in 28° 46′ N., was Cape Non, which received this appellation from the idea that it was utterly impossible to get beyond it. The Portuguese mariners sent by Prince Henry, however, doubled it, but found Cape Bojador in the distance, whose violent currents and raging breakers

* Two Jewish physicians of John of Portugal, named Roderick and Joseph, who also calculated tables of the sun's declination.

running for miles out to sea, seemed a barrier which could not even be approached with safety by seamen who were in the habit of coasting along the shore; hence they propagated the idea that he who should double Cape Bojador would never return.

In 1418, Tristan Vaz discovered an island of the Madeiras, to which he gave the name of Porto Santo, because he sighted it on the feast of All Saints; and, in the following year, the Portuguese discovered an island to the westward of Porto Santo, to which the name of Madeira was given, on account of its being covered with wood. These islands still remain in possession of the Crown of Portugal. Creeping on by slow but sure steps, in 1439 the awful promontory of Cape Bojador, situated in lat. 26° 7′ N., was rounded, and, in the following year, the Portuguese navigators sighted South Cape Blanco, in lat. 20° 46′ N. Thus the tropics were at length penetrated, and these regions divested of their fancied terrors. In 1446, Nuno Tristan doubled Cape Verde, in lat. 14° 44′ N., and, two years later, Don Gonzalo Vallo sailed to the islands which he called Azores (or the Hawk Islands, from the Spanish word *Açor*, 'a hawk'), where he established settlements. Three years later the Cape de Verde Islands were discovered. The first was called St. Maio, because it was seen on May Day, and others were named St. Philip and St. Jago; the latter is the chief island, being about thirty-two miles long and fifteen broad, and contains Porto Praya, the finest harbour in the group. The other islands, seven in number, were discovered in 1460.

The regent, Don Pedro, ruling during the minority of Alfonso IV., made a grant of the islands of Porto Santo and Madeira to Prince Henry, who applied for Papal sanction, and received from Pope Martin V. a

bull, dated 1444, conferring on the Crown of Portugal all countries that should be discovered on that side to the Indies, which occasioned great disputes with the Spaniards, who obtained a Papal grant of all lands to the west, as far as the Indies, thus dividing the world between them—that is, as far as paper edicts and bulls could do so.

In 1471, Pedro d'Escovar passed the equator, and discovered the island of St. Thomas and Prince's Island, and, on the following New Year's Day, another island, which he called Anno Buono, whence the word has been corrupted to Annabon.

We are told that the inhabitants of the African coast felt great astonishment and fear at the sight of the Portuguese vessels, and when they first saw the ships under sail took them for large birds, with white wings, that had come from foreign countries; but when the sails were furled, they thought from the great length of the vessels, and from their swimming on the water, that they must be great fishes. Others believed that they were spirits that wandered about by night, because they were seen at anchor at one place in the evening, and would be a hundred miles distant by the following morning. Not being able to conceive how anything human could travel more in one night than they could in three days, they set down the European vessels as denizens of another world. 'There is no man ignorant,' says Sir Walter Raleigh, 'that ships, without putting themselves out of breath, will easily outrun the soldiers that coast them;' and he adds as an example: 'A fleet of ships may be seen at sunset, and after it, at the Lizard, yet by the next morning they may recover Portland, whereas an army on foot shall not be able to march it in six days.'

A spirit of discovery and a hope of gain through commerce were the real and avowed objects of the Portu-

guese in venturing into these unknown seas, and a navigator, Diego Cam, having heard of a Christian monarch who was said to reign in Ethiopia, on his return to Portugal magnified his power so much that King John II. resolved to send an embassy to the prince who, he concluded, was the famous and mysterious potentate known as Presbyter, or Prester, John. This singular name afterwards came to be applied to the Christian King of Abyssinia, and the geography of the African continent not being then well understood, it was supposed that ambassadors from the western coasts might very easily reach his capital. As in the case of the Arabs, who sought for Gog and Magog, and in our day, the popular desire to plant the British flag on the North Pole, the Portuguese thought that great glory would be acquired by the discovery of the abode of this mysterious potentate. Hence, instructions were given to all officers employed in the African service, to endeavour in every quarter, and by every means, to accomplish this grand object; and accordingly they never failed to question all whom they met on the coasts about Prester John, whose name, they were told by the natives, had never been heard of. They then besought the people whom they saw on the coasts to inquire up the country for Prester John, promising large rewards to any who should give information which might lead to success.

A correspondence between the King of Benin, on the African coast, and John II. of Portugal, led the latter to suppose that the real Prester John had been at last discovered, for the negro ambassador of this sable monarch informed the Portuguese king that about 600 or 700 miles east of Benin, there was a mighty king, called Ogané, who was held by the Pagan chiefs in that country in the same veneration as was paid to the Pope

by the sovereigns of Europe. They further stated that, at the death of the King of Benin, his successor was required to send ambassadors with presents to Ogané, who confirmed him in his kingdom, and received in return a staff and a brazen helmet, for a sceptre and crown, and also a brass cross for the neck, without which ensigns of his dignity the king would not be regarded as their lawful sovereign by the people. This Ogané, it was stated, was invisible, a silk curtain being always suspended before him; and, when the ambassadors were about to retire, a foot was protruded from the curtain, to which they paid homage, and upon their departure they were presented with small crosses. As a specimen of the tales extant of the exploits of Prester John, we are told that, when the Mongol army marched against the Christians of the 'greater India,' of which he was king, he 'caused a number of hollow copper figures to be made, resembling men, which were stuffed with combustibles and set upon horses, each having a man behind on the horse, with a pair of bellows to stir up the fire. At the first onset of the battle, these mounted figures were sent forward to the charge; the men who rode behind them set fire to the combustibles, and then blew strongly with the bellows; immediately the Mongol men and horses were burnt with fire, and the air was darkened with smoke. Then the Indians fell upon the Mongols, who were thrown into confusion by this new mode of warfare, and routed them with great slaughter.'

King John despatched two ambassadors, Pedro de Covillan and Alfonso de Payer, to the Court of Prester John, by way of Alexandria and Aden, where they parted; the latter proceeded to Abyssinia, and De Covillan journeyed to India, and crossing the Indian Ocean, arrived at Sofala on the African coast, in lat.

20° 11′ S., whence he made his way to Cairo. Here, learning of the murder of his coadjutor on the road to Abyssinia, he wrote to his sovereign acquainting him with his discoveries, and asserting that a short passage might be found round Africa to the Indies, and himself proceeded to Abyssinia, where the king, Alexander, received him well. Unfortunately this prince died suddenly, and his successor, called Mahee, refused him leave to return home, and kept him a prisoner at his court, where he remained until the year 1520, when he was seen by Don Roderigo de Lima, who came thither as envoy from the Portuguese king.

J. A. Mandelsloe, who voyaged to the East Indies in 1639, says a fort was built on the island of Argoin, on the Senegal coast, in 1461, and, in the same year, King Alfonso 'farmed it out to Ferdinand Gomez, on condition that he should be obliged to discover every year a hundred leagues of the coast, by which means the Portuguese had, in 1497, discovered the isles of Fernando del Po, St. Thomas, Bueno, and Del Principe, and the Cape of St. Katherine's.' In 1481, John II., on his accession to the throne, sent Diego d'Azambuja, who, on the 19th of January, 1482, discovered Elmina, or Mina, near Cape Coast Castle, which received its name from the quantity of gold found there. At Elmina the Portuguese built a fort. In 1484, John sent Diego Cam and Juan Alfonso d'Avero, the former of whom doubled Capes Lopez and St. Catherine, and entered the mouth of the river Congo, called the Zaire by the Portuguese. Of this river, which has only recently been explored from its source by Mr. H. M. Stanley, Mandelsloe says, 'It is beyond all question the largest river in all Africa, for being joined with the rivers Vambo and Barbella as it passes through the country, it is at the mouth at least twenty-eight leagues broad.' King

Emanuel sent another squadron to these parts in 1504, but the discovery of the Cape route to the Indies, and the superior riches of these countries, tended to divert attention from African exploration. D'Avero discovered the kingdom of Benny, or Benin, and visited, says Mandelsloe, 'the city of Angatoe, twelve leagues from the sea, and somewhat further in the country, upon the river called Rio Formosa by the Portuguese, its capital city bearing the same name as the kingdom.'

In August, 1486, the famous navigator, Bartholomew Diaz, sailed from Lisbon with two vessels, and after discovering about a thousand miles of unknown coast line, along which he set up stone crosses, with the arms of Portugal, and quelling a mutiny of his crew who wished to turn back, at length rounded the most southern promontory of Africa, which, in consequence of the storms and tempests he experienced, he called the stormy cape (Cabo Tormantoso). The King of Portugal, however, by a happy inspiration, renamed it the Cape of Good Hope (Cabo del Buono Esperanza) in order that future navigators might not be discouraged at the inauspicious title given by Diaz, who himself found a watery grave off that famous promontory. Camoens, in his 'Lusiad,' represents the awful Cape calling down vengeance on the heads of the seamen :

> 'Who passed the bounds which jealous Nature drew
> To veil her secret shrine from mortal view.'

And the great poet speaks of the fate of the discoverer in the lines :

> 'Then he who first my secret reign descried,
> A naked corse, wide floating o'er the tide,
> Shall drive.'

Diaz's great discovery was soon to bear fruit, which has revolutionised the relations between East and West, and, more than any single event, conduced to increase the power and influence of England.

CHAPTER VIII.

Survey of European Intercourse with, and Knowledge of, India, from the time of Alexander the Great to the Landing of De Gama at Calicut.

It is supposed by many that India was the country from which the Phœnician pilots of King Solomon's fleets 'brought gold and silver, ivory, apes, and peacocks,' inasmuch as the original designations of these various importations are not Hebrew but Sanscrit. The earliest fact which Herodotus has recorded respecting the intercourse of Indians with other nations, is the conquest of the western part of Hindostan by Darius I.; but the sway of the Persians over that country was of brief duration, and with the conquest of Darius III. by Alexander, and the death of that prince, in the year 330 B.C., the Persian Empire ceased. To Alexander—who proceeded to the banks of the Hyphasis, now known as the Sutlej, and by the natives called the Ghurra, whence he was compelled to retrace his steps owing to the discontent of his troops—is due the commencement of that Indian trade, which has subsequently proved of such vast importance to Europe. The Macedonian conqueror founded Akra (Akron of the Greeks), Nicæa and Bucephalia on the Hydaspes (Jhelum) and other cities, and proceeded down the Jhelum to Mooltan where he was wounded when storming the place. We have described how he commissioned Nearchus to survey

the coasts from the mouth of the Indus to that of the Shatt-ul-Arab, thus opening a communication with India both by land and sea, so that the treasures of the country might be carried through the Persian Gulf into the interior of his Asiatic dominions, while by the Red Sea they might be conveyed to Alexandria. But the untimely death of this great warrior and sagacious monarch suddenly arrested the prosecution of these grand conceptions. The development of the plans of Alexander was not lost sight of under the enlightened government of the Ptolemies. Strabo, who wrote shortly before the commencement of the Christian era, also states that some, though few, of the traders from the Red Sea had reached the Ganges.

The first European to visit India after Alexander's expedition was probably Megasthenes, who was sent by Seleucus, one of his successors, to negotiate a peace with Sandracottus after he himself withdrew from India to encounter his rival Antigonus. Megasthenes dwelt for several years in the city of Palibothra,* supposed to have occupied the site of the modern Patna, and wrote an account of the country, to which, it is asserted, Diodorus Siculus, Strabo, and Arrian are indebted.

Attempts have been made to identify the places mentioned in the voyage of Nærarchus, by Arrian (see Gronov edition). Moghu, or Moghunah, situated in the bay between Ras Bostanah and Ras Yarid, on the Persian shore, and formerly a station of the Indian Navy, was called Sidodone. Ras Yarid is called by Niebuhr, Ras-el-Jerd, or Baldhead. Many other places in the Persian

* This is the name of a city mentioned in the semi-mythical voyage of Jambulus, though it can scarcely be the same, unless the identification of the island mentioned therein with the Maldives or Ceylon is incorrect.

Gulf are rendered classical by the allusions to them in the voyage of Nærchus. To the west of Kongoon is Uhm-Kheilah, called by European sailors, Cape Berdistan (or Verdistan), the 'Place of Cold.' The island Ormuz, mentioned by Arrian (p. 352), is called Organa, Gerun, and Gyrina, by Strabo; and Minab or Minaw, from Mina-aub (blue water), is called Anamis by Nærchus. Neoptana in Karmania is the country of the Ichthyophagi, which terminates at Cape Jask, the Bardis of Arrian. Other places outside the Gulf, identified as having been visited by Alexander's admiral, are Cape Gwadel, or Ras Noo, which he describes; Gwadel Bay, called Mosarna; and Ashtola, known also as Haptalah and Sungadeep, an island off the Beloochistan coast, which he calls Carmine. Koh Mubarek, near Cape Jask, signifying the 'Blessed Mount,' is called by Marcian, the 'Round Mount of Semiramis' but we do not find any mention of it in Arrian.*

One of Megasthenes' companions, Onesicritus, who had served in Alexander's fleet as captain of the royal galley, gives the earliest account of Ceylon. The Egyptians traded with India by way of Coptos and Berenice, whose ruins at Foul Bay, on the shores of the Red Sea, have been identified by Captains Moresby and Carless, Indian Navy. Major Rennell says: 'Under the Ptolemies the Egyptians extended their navigations to the extreme points of the Indian continent, and even sailed up the Ganges to Palibothra.'

By the decisive victory gained by Augustus Cæsar

* Among the chief emporia mentioned by Arrian are Barygaza (Broach) in the Gulf of Cambay, Ozene (Oojein) in Malwa, and Tagara (Deoghur) near Aurungabad. The stadium of Nærchus is 18·7 to the nautical mile.

over the fleets of Antony and Cleopatra, on the 2nd of September, B.C. 31, off Actium, on the coast of Epirus, the Empire of Egypt passed from the family of Ptolemy, of whom Cleopatra was the last representative, to the Roman Conqueror, in whose honour the Senate of Rome decreed that the name of the month occupied in subduing this ancient monarchy should be changed from Sentilis to August. The Roman generals were equally successful in repelling the invasion of Egypt by Candace, Queen of Ethiopia, of which Strabo gives an account, and the power of Augustus rose to such a height, that this sovereign and Porus, King of India (this name, as also those of Candace and Cleopatra, appear to be common to the monarchs of those countries), sent embassies and sued for peace. Augustus fostered the maritime trade of his vast possessions, and Caligula, though in other respects a bad prince, raised the maritime strength of the empire to its highest pitch.

According to Arrian, the discoverer of the south-west monsoon was one Hippalus, after whom the wind was named, who made the experiment about the year A.D. 50, that is about eighty years after Egypt had been annexed to the Roman Empire. The great geographer, Ptolemy, who wrote early in the second century, is far less accurate in his description of India than Arrian,* whose account was written about 140 B.C., and who correctly represented it as extending from north to south, while Ptolemy commits the egregious error of making the coast line run nearly west and east, the mouths of the Ganges, of which he names and describes six, being removed sufficiently eastward to allow room for the

* It may be noted here that some writers, including the learned Dodwell, deny the authorship of the 'Periplus' to Arrian.

insertion of the numerous names of places of which he had gained information. The abundance of topographical information for which his writings are remarkable, says Major, was due to the great extension which commercial intercourse had received in the century immediately preceding, and to the facilities which his residence in Alexandria, in the centre of a large portion of the commerce of the day, afforded him of consulting the itineraries of various merchants. He delineates with great inaccuracy as to its general form, but with wonderful copiousness of detail as to the names of towns, rivers, and headlands, that part of India which lies beyond the Ganges. His Aurea Chersonesus is shown by D'Anville to be the Malay Peninsula, and his Sin-hoa, the western part of Cochin China.

Pliny (book vi. chap. xxiii.) gives a detailed account of the route by which Indian produce was brought to Egypt and Rome, and, as the Red Sea swarmed with pirates, each ship carried a detachment of soldiers. The goods intended for the Indian market were embarked at Alexandria, thence carried to Juliopolis, two miles distant, and so up the Nile to Coptos, a distance of 303 miles (placed by Ptolemy in 25° 20′ N. lat.). From Coptos the goods were transported on camel-back to Berenice, a distance of 258 miles, the time occupied thus far from Alexandria being ordinarily twenty days. Here they were warehoused, and at the proper season were embarked, and in about thirty days arrived at Cana, or Muza, on the coast of Arabia, or more generally at Ocelis (placed by Ptolemy in 12°), which is a few miles from the southern entrance of the Straits of Bab-el-mandeb, on the Arabian side, and near the island of Perim, called in the 'Periplus' the island of Diodorus. This port of Ocelis or Okelis, now known

by the Arabs as El Toorba, was occupied by the Romans, and held the position, attained in the time of the Greek domination of Egypt, by Adula or Adulis, which Ptolemy, the geographer, places in 14° 20′, and whose ruins are still visible in Annesley Bay, a few miles to the southward of Massowah, which the Greeks called Drine (see p. 2 of the 'Periplus'). From Ocelis the fleet sailed to India, making in forty days the port of Muziris—probably Mangalore, as Pliny describes it as dangerous for disembarcation on account of the roadstead being at a considerable distance from the shore, so that cargoes had to be landed in boats (and in 14° lat. according to Ptolemy),—or the port of Becara, whence the goods were transported by boats to the great trading town called Madan.

The fleet, in order to have the advantage of the trade wind, usually returned to Alexandria towards the latter end of December, when the goods were taken to Rome by the annual fleet established by Augustus. The capital invested by the Roman merchants in the commodities for this commerce, amounted, in the time of Pliny, to 550,000,000 sesterces, equal to about £1,400,000 of our money, and the profit gained was 100 per cent. The Emperor Trajan sent a fleet to crush the pirates of the Red Sea, and it is certain that either he, or his successor, reduced a great portion of the country known as Yemen, for Arrian, in his 'Periplus,' speaks of a port called Endeman, or the Happy, formerly a place of great commerce, though he adds, a little before his time it was destroyed by Cæsar. Harris, in his learned and exhaustive dissertation on the commerce of the ancients with the Indies, is of opinion that Endeman is the same as Aden, and Muziris he identifies with Diu.

Many of the islands and places mentioned by the ancients it is impossible to find. Thus Diodorus Siculus gives a detailed account of an island called Panchaia, lying between the Red Sea and the coast of India, which he had from one Eucucrus, though Plutarch denounces the whole as an absolute fiction, the only island we know of being Socotra, which was settled by the Ptolemies, and is described in the 'Periplus.' The Arab voyagers of the ninth century assert that Socotra was colonised with Greeks by Alexander the Great, and it is described by Marco Polo and Abulfeda, and was visited by Nicolas Conti, who spent two months there, and by Francis Xavier and P. Vincenzo, the Carmelite.

The ancients knew little of the productions and physical features of the interior of India, but that inaccurate writer, Diodorus Siculus, gave highly coloured descriptions of the country, which, besides being a garden of plenty, contained all the minerals in profusion. Strabo also wrote an exaggerated account of its wealth, and Pliny, who had read every author on the subject, repeats the fables as to its riches, handed down by his predecessors. Arrian also wrote in glowing terms, and so did the geographer Dionysius, supposed to be a contemporary of the Emperor Augustus, whose work was rendered into Latin by Priscian. Reference has already been made to the voyage to the Indies made by one Endalus in the reigns of Ptolemy Euergetes, of which Strabo has given an account, though he doubts its authenticity. Pliny also mentions the voyage of Patroclus, who was sent to make discoveries, but it is certain that the limits of Eastern countries known to the ancients were Sumatra, and the Malay Peninsula, also supposed to be the Ophir of the Scriptures. Captain Burton, in his

work 'The Gold Mines of Midian,' would apply the term Ophir (otherwise called Ushaz or Parvaim), which he translated 'Red Land,' to Eastern Africa and Western India, but Sutzen, among others, is of opinion, and as some think, has conclusively shown, that Ophir, the true translation of which is 'Riches,' is to be looked for in Southern Arabia. But whether the ships of Tarshish* went to Mozambique or India, or Malacca, for gold, the voyages are said to have lasted three years.

Though some writers have sought to prove that the ancients wanted few of the conveniences of modern navigation, possessing even the compass and charts, and that much of the knowledge of modern times was only lost, and has now been recovered, there are only obscure passages or poems to bear out these statements, and Vegetius assures us that there was no navigation of the seas between November and March, and that it was not thought safe to undertake a lengthy voyage before May. According to Pliny and other authors, the ancients feared to venture into the open seas, but regulated their course by tables containing the names and distances from each other, of places on the coast; indeed their ships were built in a manner rendering them unsuitable for long voyages, or for encountering a heavy sea. The Arabians and Indians were much bolder, and it may be gathered from the accounts of Strabo and other writers, that their vessels were swifter, being probably much like the dhows and bagalas employed in the present day in the Indian trade to Berbera and the Red Sea. A very competent authority on these matters, Sir John Chardin, who travelled and wrote much, says of the degrees of knowledge attained by the ancients:—'I cannot tell whether the Chinese found out the art of

* A name applicable to several places.

navigation and the compass, as they did the art of printing and artillery; we should consult the learned men among them to be assured of it. But for the other Asiatics, I boldly assert they are beholden to us for this wonderful instrument which they had from Europe by the hands of the Arabs, a long time before the Portuguese conquests; for first, their compasses are exactly like ours, and they buy them of the Europeans as much as they can, scarce daring to meddle with their needles themselves. Secondly, it is certain the old navigators only coasted it, which I impute to the want of this instrument to guide them, and instruct them in the wide ocean. We cannot pretend to say they were afraid of venturing far from home, for the Arabs, the first navigators in the world, in my opinion, at least for the Eastern seas, have, time out of mind, sailed from the bottom of the Red Sea, all along the coast of Africk, down to the tropic of Capricorn; which is a space of fifty degrees, and the Chinese have always traded with the inhabitants of the islands of Java and Sumatra, which is also a very considerable voyage.' He adds that he could never learn from the natives where the compass was introduced among them, though in all the Indian ships in which he sailed, he found that the quadrants in use were of European manufacture, though having the Arabic characters. He speaks of the Arabs as the most skilful navigators of the East, but adds that they have no charts.

Thus it may be gathered that to the want of charts and compass is due the meagreness of the discoveries made by the maritime nations of antiquity who traded with the East, commencing with the establishment of Tyre to the reign of Constantine the Great, a period of eight centuries.

Alexander's Indian conquests were lost to his successors for want of a navy, and Augustus, who designed to reduce Arabia, was unable to accomplish his ambitious projects for the same reason. It was reserved for this country to be the undisputed mistress of Southern Asia, and this great and unique position she owes to her navy, and will retain only as long as her maritime ascendency is maintained. After the partition of the Roman Empire, the intercourse between Rome and India, by way of the Red Sea, began to decline, though while the Greek Empire flourished, Constantinople was the centre of commerce between Asia and Europe.

At the time the Roman State became sub-divided, three fleets were maintained for the defence and support of the Empire, but their sphere of duty was confined to the Mediterranean. One, called the fleet of Alexandria, carried the commodities of the coast from that port to Constantinople; and a second, called the fleet of Africa, was employed for the supply of Rome; while the third, which was stationed at Seleucia, on the Orontes, conveyed the commerce of Persia and Upper Asia. This last was divided into several squadrons, and appears to have been of great importance. Besides these there was the fleet of the Pontus Euxinus, or Black Sea, the shores of which, as in our own day, were a granary for Constantinople. Particulars of the laws regulating these fleets, and other details, may be gathered from the code of the Emperor Justinian, who reigned A.D. 528-565, and from contemporary writers.

But the Greeks were supplanted in a great measure by the Persians, who, having learned from the small Indian traders, who frequented the various ports in the Persian Gulf, the safety and rapidity with which the voyage from thence to Malabar and Ceylon might be performed,

fitted out vessels which made this voyage annually, and thus in exchange for specie and some of the commodities of their own country, they brought home not only the costly products of India, but also those of China, which they were able to procure at Ceylon. Under the Emperor Justinian, who introduced silk-worms, the Greek Emperors were no longer indebted to the Persians for their silks, but notwithstanding this advantage, the merchants of Constantinople, narrowed in their fortunes by the repeated exactions of Justinian, were but little able to contend with their wealthy rivals in commercial pursuits. In the reign of Justinian, Cosmas, an Egyptian merchant, made some voyages to India, on account of which he received the surname of *Indicopleustes*, and composed various works of which one, entitled 'Topographia Christiana,' contains a particular description of India, whence, and from the account of the contemporary Greek historian, Procopius, is derived our knowledge of the events connected with Indian commerce in the time of Justinian.

From the reign of Alexander there was a considerable trade from India through Persia, by the banks of the Tigris, to those of the Indus, but in process of time the line of route was changed, and the Indian commodities were shipped at Muziris (Mangalore), Barygaza, and Patala, supposed to be places near the mouth of the Indus, and carried through the Persian Gulf, up the river Euphrates, and thence by land to Palmyra (or Tadmor in the wilderness), where they were stored in magazines, and thence transported to Antioch for distribution over Europe.

Great changes were wrought by the Arabs, who, imbued with the new religion of Mahomet, conquered Persia, established the Kaliphate at Baghdad, subdued

Egypt, and excluded the Greeks from all intercourse with Alexandria, which had for a long time been the principal resort for Indian goods. The Arabs entered upon the pursuit of mercantile enterprise and speedily outstripped the limits of previous nautical investigation. The second Khaliff, Omar, desirous of attracting the Indian trade from Persia, in the 636, built the city of Bussorah, which enjoyed a vast trade up to very recent times, and, even in the early portion of the present century, the East India Company maintained an agent for political and mercantile purposes, with a marine guard. About the middle of the eleventh century the empire of the Khaliffs began to decline, and, soon after, the newly established cities of Venice, Genoa, Amalfi, Pisa, and Florence, entirely engrossed the Indian trade, every important port of Europe being visited by their mariners. On the partition of the Grecian states, in 1104, by the leaders of the fourth Crusade, the Venetians obtained possession of part of the Morea, and of some of the most important islands of the Archipelago, and were thus enabled to secure essential advantages in the Indian trade over the rival states of Italy. The world poured its commerce through the gates of Venice.

'To this fair Queen of Adria's stormy gulf,
The mart of nations! long, obedient seas
Roll'd all the treasure of the radiant East.'

The Genoese, jealous of this superiority, conspired with the disaffected Greeks under the command of Michael Palæologus, and drove the Venetian merchants from Constantinople, and thus the entire commerce of the Black Sea, and consequently the inland trade with India, fell into their hands.* The Venetians, in reta-

* See Introduction to 'India in the Fifteenth Century,' by R. H. Major, Esq.: ('Hakluyt's Society's' volume for 1857.)

liation, procured a Bull of dispensation from the Pope, by which they were permitted to open a free trade with the infidels; and, accordingly, by the settlement of their merchants at the different trading cities of Egypt and Syria, established their intercourse with India upon a more solid basis.

While these rivalries were pending between the Venetians and the Genoese, the Republic of Florence, under the administration of Cosmo de Medici, procured, through ambassadors sent to Alexandria, a participation in the commercial privileges which were enjoyed by the Venetians. The Genoese, however, still carried on the northern trade between India and Constantinople, until they were finally expelled from that city on its capture, by Mahmoud II., in 1453. When, says Mr. Major, the Turkish Government became permanently established in Europe, Constantinople was no longer a mart open to the nations of the West for Indian commodities, of which a supply could only be obtained in Egypt, and the ports of Syria, subject to the Sultans of the Mamluks; and as the Venetians by their commercial treaty with these powerful princes commanded these channels of intercourse, they were enabled to monopolise the supply of the products of the East to the countries of the West, until the close of the fifteenth century, when two of the most memorable events in the annals of the world, the discovery of America, and the rounding of the Cape of Good Hope, produced an effect which proved fatal to the commerce of the Venetian Republic, and opened the trade of India to the Portuguese and the Western nations.

Before the arrival of the Portuguese in the East, the chief maritime commercial powers were the Arabs, who established themselves in various places in the

Persian Gulf, East Coast of Africa, and Malabar coast. Muscat became a great emporium; Mohammedan colonies were established at Magadoxa, Brava, and Quilon; they were a power in Guzerat, Cambay, Diu, and Ceylon, and even extended themselves to Malacca, and traded with the Moluccas. The great mart in the Persian Gulf was the island of Kais, or Kenn of our seamen (the Kisi of Marco Polo), which obtained a surprising degree of opulence; at the present day the ruins of the ancient town of Harira, about two and a half miles from Mashi Point, attest the greatness of this emporium.

But the arrival of the Portuguese gave a death-blow to the ascendency of these Mohammedan merchants. The trade of Malacca, Diu, Ceylon, Brava, and other places, was wrested from them, and Ormuz, under Christian sway, eclipsed the commercial greatness of Kais, though it again was extinguished in 1622, by the rise of Gombroon or Bunder Abbas, on the adjacent coast, when to a considerable extent the trade of Persia was temporarily revived. The Arabs of Muscat now became famous as a pirate state, and for a century harassed the trade of the Mogul Emperors, and their dependents the merchants of Holland, France, and Britain; but gradually they were chased from the seas, chiefly through the instrumentality of the War Marine of the British East India Company established at Surat and Bombay for the protection of their commerce, which at a later date developed into the Indian Navy. How formidable these Arab pirates were at one time, may be gathered from the fact that, in the years 1809 and 1819, powerful combined military and naval expeditions were directed against their strongholds in the Persian Gulf, and it was only after the treaty of peace, signed in January, 1820, at their capital of Ras-ul Khymah (also known as Julfa

in old works of travel) that the fanatical votaries of Abd-ul-Wabab, whose blood-red flag had long been the terror of peaceful traders, and even of powerful potentates like the Imaum of Muscat, were brought to understand that the Great 'Company Bahadoor,' which had succeeded to the suzerainty of the Moguls, were as powerful on the sea as they had shown themselves on land by the conquest of India. Mention has already been made of the celebrated Arabian traveller and historian, Massudi, and of Ibn Haukal, a contemporary of his, both of whom visited India, the latter confining his visits to the cities in or near the Gulf of Cambay, which, he says, 'are the towns with which I am acquainted.' The Chinese scholar, Stanislas Julien, published in 1853, the narrative of the 'Journeys of Hiouen-thsang,' who passed seventeen years (from 629-45) in the countries to the west of China, and especially in Bengal, and all Southern India, as far as Pondicherry, returning by Malwa, Scinde, and Mooltan.

In the beginning of the ninth century a Mohammedan merchant, Soleiman* by name, started from the Persian Gulf, visited the Gulf of Cambay, Malabar coast, the Coromandel coast near Madras, and, crossing the Bay of Bengal, proceeded to Burmah, Siam, and China. Soliman mentions the port of Siraf in the Persian Gulf, as the emporium where the Chinese ship their goods, which came from Bussorah and other ports. There has been much controversy as to the identity of this port of

* See his narrative translated from an original Arabic MS., in the library of the Count de Seignelay, by Renaudot in 1718, rendered into English in 1733, and again in vol. i. of Harris's 'Voyages' in 1744, and finally through a revised translation into French, by M. Renaud in 1845.

Siraf. Some think it was situated at the Bay of Chiruh, or Cheroo, in lat. 26° 42′, on the Persian coast, thirty miles to the west of Charek, but Captains Constable and Stiffe, of the Indian Navy, have identified it with Taurie, or Tahri, in lat. 27° 40′. Soleiman says that from Bussora to Siraf is 120 leagues, and from thence to Muscat 200 leagues. The Mohammedan traveller, whose account appears to have been written A.D. 850, calls the Indian Ocean the Sea of Herkend, the Bay of Bengal being known to Oriental geographers as the Sea of Delarour, the Simes Magus of the ancients. Eastern writers frequently speak of the seven seas, which are exclusive of the Ocean, which they call Bab Mahit. There are the seas of Herkend and Delarour; the sea of Persia or Bussora (the Persian Gulf); the sea of Rotzuma (Red Sea), so called from a town thought by Harris to be the Clisma of the ancients; the Sea of Roum, or Constantinople (the Mediterranean); the sea called Al Chozar, or the Caspian; and the sea of Pont, or Black Sea (Pontus Euxinus).

Another important voyage in Eastern seas is that of the Spanish Jew Benjamin, who started from Tudela in 1160, on a journey extending for a period of thirteen or fourteen years. In pages 136-143 of the translation of his 'Travels,' made by Mr. Asher of Berlin, is the portion relating to his voyage in the Persian Gulf, in which the island of Kais, and El Catif (still known as Kateef) are mentioned. But the voyage of Marco Polo claims chief attention as regards the detailed observation by which it is characterised, and, as Sprengel observes, 'was long the general Manual of Asiatic Geography throughout entire Europe, especially after the voyages of the Portuguese had confirmed many of his supposed rhodomontades.' In company with his father and his

uncle, natives of Venice, who had many years before made a trading journey to Tartary, Marco Polo started in 1271, and after travelling for three years and a half across Asia and encountering a variety of dangers and disasters, at length reached the court of Kublai Khan, Emperor of China. Marco became a great favourite with the Khan, and was employed by him in several important missions to distant provinces. After a residence of seventeen years at the Court of Kublai, he became extremely anxious to return to his native country, and at length obtained permission to accompany the ambassadors of a King of Khorassan, who had come to demand a princess of the Khan's family in marriage for their sovereign. The voyage occupied a year and a half through the Indian Seas, before he reached the court of this king, named Arghun. Thence he travelled to Constantinople, and finally reached Venice in 1295.

On this return voyage, he proceeded to the kingdom of Ziamba, where he learned much of Great Java (Java), though he did not himself visit either that island or Borneo. He then sailed southward, and passing the small island of Pentan (Bentang) came to Java Minor, under which name he designates Sumatra. He appears then, says Mr. Major, to have sailed along its coasts through the Straits of Malacca to Seilan (Ceylon), noticing on his way the Island Angaman (Andaman Islands). After some stay at Ceylon he sailed to Mayabar, which, however, must not be confounded with Malabar, but is the coast of Coromandel. He notices its fine cottons; also its various superstitions, as the worship of the cow, the abstinence from animal food, the courtesans dedicated to the service of the temple, and the acts of voluntary self-sacrifice to their gods, as well as the custom of females burning them-

selves after the death of their husbands. Then passing Cape Comorin he sailed along the coasts of Malabar, where he notices the abundance of pepper and ginger; then along those of Guzerat and Cambaia, and so, across the Indian Ocean, home. In the course of his inquiries and explorations, Marco Polo took pains to make himself acquainted with the natural history and products of each country, and by his observations on the manufactures and navigation of different countries, he constantly shows his sense of what would be chiefly interesting to a maritime and commercial people like the Venetians. The commerce of India, he found, extended from the territories of Kublai Khan to the shores of the Persian Gulf and the Red Sea. He expatiates not only on the products of the countries, such as the palm, betel nut, and spices, but also of the topaz, the amethyst, and the emerald, of the sapphires of Ceylon, the diamonds of Golconda, and the rubies from the mountains of Thibet. He furthermore traces down, as far south as the Island of Madagascar, the nautical explorations of the Asiatics of the Middle Ages, and suggests to us an explanation of the reasons why those early navigators failed in discovering the southernmost point of Africa. 'They cannot go,' he says, 'further south than this island and that of Zanguebar, because the current draws them so strongly towards the south that they cannot turn back again. The vessels from Mayabar (Coromandel) take twenty days in reaching this island and three months in returning, so strong does the current lie towards the south, and never has any other direction.'

Chief among the Mohammedan geographers and travellers of Further Asia, we may safely place Ibn Batuta.*

* A translation of his travels, from the abridged Arabic manuscript copies in the Public Library of Cambridge, with notes on the history,

This indefatigable explorer started in the year of the Hegira 725 (A.D. 1324), from his native city, Tangier, at the age of twenty-two or twenty-three, and continued for thirty years with unwearied diligence travelling about in distant countries. Ibn Batuta, who was a Moor by birth, and a doctor of the Mohammedan laws and traditions by profession, set out with the purpose of accomplishing the mission to Mecca, and proceeded by land towards Egypt. The account of his singular adventures derives interest from the details which he introduces, not only of the natural productions and agriculture of India, but of its manners, institutions, and history, under the Afghan dynasty, which preceded for nearly 300 years the establishment of the Mogul power. He gives an historical retrospect, extending from the first conquest of Delhi by the Mohammedans in 1188, to the accession of the reigning sovereign, Sultan Mahomed, the son of Tughlak, in 1325, and continues the narrative by his personal adventures in India, where he arrived at the crisis when the tyranny of Sultan Mahomed drove all the governors of the provinces into open revolt, and led to the erection of independent kingdoms in Bengal and the Deccan.

On the arrival of an embassy from the Emperor of China, Ibn Batuta accepted an appointment as one of the envoys destined to convey the gifts sent in return by Sultan Mahomed, and, receiving his credentials and outfit, quitted Delhi early in the year of the Hegira 743 (A.D. 1342). He had not advanced many days' journey towards the coast, when his escort was overpowered in a conflict with the Hindoos, his colleague in the embassy

geography, botany, antiquities, etc., of the countries visited, was made by Professor Lee, and printed for the Oriental Translation Committee, London, 1829, 4to.

killed, and he himself, escaping with difficulty from his captors, made his way back, alone and on foot, to the presence of the emperor. After renewing his equipments, he again set forward, and this time reached without molestation the distant port of Calicut, where the Chinese junks awaited the embassy. He describes, among other places through which he passed, the cities of Daulatabad, Goa, and Onor, on the coast, and confirms the statements of Marco Polo as to the habits of the people.

The Imperial embassy remained three months in Calicut, till the monsoon enabled them to sail for China; but every stage in this mission was doomed to misfortune. While the envoys and the suite, with the costly gifts of which they were the bearers, were in course of embarkation at the port, a violent tempest arose, by which part of the squadron was driven on shore and wrecked; while the remaining vessels, on board of which Ibn Batuta's property and harem had already been embarked, were driven far out to sea, and instead of returning to Calicut, made the best of their way to China. Batuta himself had accidentally delayed going on board; but his two colleagues perished in one of the stranded ships, and he was left with only his prayer-carpet and ten dinars, which, he philosophically says, 'I kept as a blessing, as they had been given me by some holy men.'

At length, receiving intelligence that all his property had been confiscated on the arrival of the junks in China, he determined to resume his wanderings, and, setting sail from Onor, arrived in ten days at the Zabiyah-al-Mohli, or Maldive Islands. 'These islands,' he says, 'constitute one of the wonders of the world, for their number is about 2000, nearly 100 of which are

so close together as to form a kind of ring. The people are religious, chaste, and peaceable; they eat what is lawful, and their prayers are answered. Their bodies are weak, they make no war, and their weapons are prayers.' Their chief diet was fish, rice, and the fruit of the cocoa-tree. The coir-rope, formed from the fibres of this tree, was their principal article of commerce, and a sea-shell, called wada, was current in lieu of coined money. On the arrival of Ibn Batuta in Ceylon, he visited the mountain of Serendib, the Adam's Peak of Arab geographers, which they had seen from the sea, 'like a pillar of smoke,' at the distance of nine days' sail, and on the summit of which is the famous footstep attributed by tradition to Adam, and called by the Cingalese the footstep of Buddha. His stay in the islands of the Indian Archipelago was not of long duration, but he describes with accuracy and minuteness the clove, camphor, nutmeg, and other spices.

The only adventure which marked Ibn Batuta's voyage to Sumatra, was the sight of a huge distant object in the air, which the sailors declared was a 'rokh,' the giant-bird alluded to in the narrative of Sindbad, for which some men of letters* claim an

* The learned Baron Walckenaer, in a paper read before the Académie des Belles Lettres, on the 23rd of July, 1831, and published in the 'Nouvelles Annales des Voyages,' tome liii. p. 6, considered the narrative as genuine. Although the voyages of Sindbad the Sailor have been inserted in the 'Thousand and One Nights,' they form in Arabic a distinct and separate work, a translation of which into French was made by M. Langles, and published in Paris in 1814. The Baron Walckenaer ascribes to the voyages of Sindbad a date about coincident with that of Soleiman, that is the beginning of the ninth century; and, says Mr. Major, although, doubtless, these voyages may be imaginary when regarded as the explorations of an individual, they are not the less certainly based upon real facts within the knowledge of the Arabs of the time. Of Sindbad's account of the

authenticity that will astonish those of us who have always considered them as mere stories told by the fair Princess Sheherazade at the request of her sister Dinarzade : ' Sister, if you are not sleepy, tell us one of those beautiful stories of yours.' In Wilford's paper on Egypt and other countries (' Asiatic Researches,' vol. viii. p. 343) we read : ' In the language of mythology the nagas, or uragas, are large serpents, and the garudas, or supernas, immense birds, which are either the condors of M. Buffon, and vulture griffons of Linnæus, called rokhs by the Arabian fabulists and Marco Polo, or mere creatures of imagination, like the simorg of the Persians, whom Sadi describes as receiving its daily allowance on the mountain of Kâf.

Marco Polo gives the following account of the rokh : ' The people of the island of Magasta (now called Madagascar), report that at a certain season of the year, an extraordinary kind of bird, which they call a rokh, makes its appearance from the southern region. In form it is said to resemble the eagle, but it is incomparably greater in size, being so large and strong as to seize an elephant with its talons and to lift it into the air, from whence he lets it fall to the ground in order that when dead it may prey upon the carcase. Persons who have seen this bird, assert that when the wings are spread they measure sixteen paces in extent from point to point, and that the feathers are eight paces in length, and thick in proportion.' Marco Polo, conceiving that these creatures might be griffons, half birds and half lions, questioned those who declared they had seen them, but they maintained that their shape was that of the eagle. He adds that the ' Grand Khan ' sent

rokh, some observations were published by R. Hole, in a work entitled ' Remarks on the Arabian Nights Entertainments.'

messengers to Madagascar to inquire into the truth of the story, and they brought with them a feather of the rokh, said to have measured ninety paces in length. But Marco Polo takes care to let it be understood that he only speaks from hearsay.

Sindbad also talks of gigantic eagles, huge serpents, 'the least of which was capable of swallowing an elephant,' and an enormous tortoise twenty cubits in length and breadth. According to Ælian, tortoises whose shells were fifteen cubits in length, and sufficiently large to cover a house, were to be found near the Island of Taprobana. Pliny and Strabo mention the same circumstance, and say that men used to row in them as in a boat. Diodorus Siculus adds to their testimony, and assures us, on the faith of an historian, that the 'chelonophagi' (shell-fish eaters) derived a three-fold advantage from the tortoise, which occasionally supplied them with a roof to their house, a boat, and a dinner. Fossil remains of this tortoise were discovered by Dr. Falconer and Major Cautley, in 1835, in the tertiary strata of the Sewalik Hills (or Sub-Himalayas), and its vast size may be seen by the cast in the upper galleries of the British Museum.

Of the later voyages to India, that of Nicolo di Conti, a Venetian, takes the lead both in date and importance. He proceeded from Damascus, where he resided as a merchant, down the Euphrates to Bussorah, and thence by Ormuz to Cambay. He crossed Southern India, visited Ceylon (Zeilam), the Andaman Islands, and Sumatra (which he wrongly identifies as Taprobana), China (which he calls Major), Java, and Burmah. The Russian traveller, Athanasius Mikitin, of Twer, also visited India in the years 1468-74. He proceeded down the Volga to the Caspian Sea, through Bokhara,

and retracing his steps through Persia, proceeded by sea to Ormuz and Choul on the coast, thirty miles from Bombay, and returned to Russia by Muscat, Ispahan, and Trebizond. A third voyage made in the fifteenth century, was by a Genoese, Heronimo de Santi Stefano, who proceeded from Cairo, to Ghennah, Cosseir, Aden, and Calicut. He then sailed to Ceylon, Burmah, and Sumatra, thence returning by Cambay, Ormuz, Shiraz, and Ispahan, to Aleppo.

CHAPTER IX.

The Voyage of Vasco de Gama to India—Cabral establishes the first European Factory in India—Other Portuguese Expeditions to India—Almeida appointed Viceroy of the Indies—Discovery of Tristan da Cunha and Madagascar—Almeida is succeeded as Viceroy by the great Albuquerque—His Career and Conquests—Death and Character of Albuquerque—Decline of the Portuguese Power in the East—The Establishment of the Portuguese at Macao, and a Sketch of their Relations with China—Portuguese Discoveries in the Far East—Portuguese Fleet traverses the Red Sea as far as Suez—Decline of Portugal in the East.

On the 9th July, 1497, Emanuel, who had succeeded his cousin on the throne of Portugal two years before, despatched Vasquez (or Vasco) de Gama on his memorable voyage, with the *Gabriel*, of 120 tons, two other vessels, and a small store ship, the whole carrying a complement of 160 sailors and soldiers. On the 20th of November De Gama doubled the Cape of Good Hope, and sighting, on Christmas Day, the land which he called Tierra de Natal, in honour of the day, entered the port of Mozambique (in lat. 15° 15′) on the 1st of March, 1498. Here, many of his people died of scurvy, and, after narrowly escaping destruction from the treachery of the natives, he sailed for Mombaza (in lat. 4° 4′ S.), thence proceeding to Melinda,* where he met

* Port Melinda or Melunda is formed by Leopard Reef (so called from H.M. ship *Leopard*, flagship of Admiral Blankett), two-and-a-half miles off shore, and other reefs. Near to it, in lat. 3° 13′ S. is Vasco de Gama's Pillar, so called after the great Portuguese navigator.

with great civility from the chief and people. De Gama now struck boldly across the Indian Ocean, and, on the 17th of May, sighted the Malabar coast, and cast anchor at Calicut, where he was well received by the potentate known as the Zamorin.

The Mohammedan merchants were, however, jealous of the Christian traders, and, when we consider the result of this first visit to India by Europeans, we cannot feel surprised at the sentiment; De Gama, consequently, proceeded to the Island of Anjidiva (in lat. 14° 45′ N.), off the west coast of India, whence he sailed for Europe. On his way he touched at Melinda, where he took on board an envoy from the ruler to his sovereign, and, having burnt one of his ships, the *St. Raphael*, commanded by his brother, Paul de Gama, owing to the paucity of her crew, proceeded to Zanzibar and Mozambique. On the 10th of March, 1499, he doubled the Cape, and, proceeding thence to the Azores, arrived in September at Lisbon, where he was received with the utmost distinction by the king, who created him Count de Vidiguera, and conferred handsome gifts on him and his officers and men, of whom only sixty had survived, the remainder, including Paul de Gama, having fallen victims to sickness during this ever-memorable voyage.

Camoens writes of the achievements of this intrepid seaman, which were fraught with such tremendous issues to the world:

> 'With such mad seas the daring Gama fought,
> For many a day and many a dreadful night,
> Incessant labouring round the stormy Cape,
> By bold ambition led, and bolder thirst
> Of gold. For them from ancient gloom emerged
> The rising world of trade—the genius, then,
> Of navigation; that, in hopeless sloth,
> Had slumbered on the vast Atlantic deep

> For idle ages, starting, heard at last,
> The Lusitanian prince, who, heaven inspired,
> To love of useful glory roused mankind
> And in unbounded commerce mixed the world.'

King Emanuel now fitted out a second expedition of thirteen ships, having 1500 men on board, which he placed under the command of Pedro Alvarez de Cabral, who sailed in March, 1500. On his passage out, Cabral, in keeping to the westward, to avoid the storms, in which he lost five vessels, discovered that part of the South American coast now known as Brazil, which he called the land of the Holy Cross, and of which he took possession in the name of his master. Having established a colony of twenty condemned persons, he sent back Gaspar Lamidos with the news, and sailed with eight ships, but soon after encountered off the Cape of Good Hope severe gales, in which he lost one of his ships, commanded by Bartholomew Diaz, who had first rounded that promontory. Continuing his voyage, Cabral arrived at Mozambique with only six sail. Having refitted his shattered ships, he visited Quiloa, or Keelwa (in lat. 8° 57′ N.), and thence proceeded to Melinda, where he landed the native envoy, whom De Gama had taken to Portugal, and then sailed for Anjidiva, where he recruited. On the invitation of the Zamorin, Cabral visited Calicut, where he established a factory. Owing, however, to the injudicious conduct of his agent, one Correa, and his own overbearing disposition, he became involved in hostilities with the natives, who burnt down the factory and massacred the inmates, upon which Cabral made reprisals by burning ten ships and cannonading the town, after which he sailed for Cochin, some ninety miles distant. Here he was well received by the native potentate, and, having

visited Cannanore, concluded a treaty with these princes and the ruler of Coulan; after which he embarked envoys from these States, and sailed, in January, 1501, for Portugal. Near Melinda he lost one of his ships, but arrived at Lisbon with the remainder, on the 23rd of July. Though Cabral brought home a very rich cargo, the great losses he had suffered displeased the king.

Meanwhile Emanuel had despatched two squadrons to Brazil of six ships, four of which were lost at sea, and a second, to India, of four ships, under Juan Nova Colleca, who arrived at Cannanore. While on his passage to Cochin, he encountered a fleet of eighty vessels sent by the Zamorin against him. After a severe action, he sunk ten large ships, four barques, and other small vessels, and killed 400 men, and, on his arrival at Cochin, was received with open arms. Colleca then sailed for Portugal, and on his passage touched at St. Helena. The king now fitted out a fleet of twenty sail, which he placed under the command of De Gama, who sailed from Lisbon in the spring of 1503. De Gama first proceeded to Quiloa, the ruler of which he compelled to pay an annual tribute of 2000 crowns to his master, and thence sailed to Cannanore and Cochin, where he was well received by the Native princes. At Cochin a deputation attended from the Christians of St. Thomas, to whom we have made reference as having been visited by a missionary from King Alfred of England, and he agreed to leave behind a squadron for their protection. As Gama was preparing to return to Europe with rich cargoes, he was attacked by a fleet of twenty-nine sail, sent against him by the Zamorin, but defeated them with great loss, capturing two of the largest vessels. De Gama having left behind him six ships, under

Vincent Sodrez, sailed for Lisbon, where he was received with acclamation. The Zamorin now attacked Cochin, and forced the rajah and the Portuguese to take refuge on a neighbouring island, whence he was repulsed with heavy loss. As for Sodrez, he acted with great baseness; declining to take part in the defence of Cochin, he sailed for the Red Sea, for the purpose of acquiring plunder, but his ship was lost and he was drowned.

It now became the practice to send a fleet annually to the East Indies, and, on the 6th of April, 1503, the two Albuquerques, Alfonso, the great Viceroy, then fifty years of age, and his cousin, Francisco, sailed each in command of a squadron of three ships. The Albuquerques, reinforced by three ships Francisco met on the way, drove the Zamorin's garrison out of Cochin, and reinstated the rajah, who gave the required permission to erect a fort near the town, which is the first occasion of the settlement of a European Power on the mainland. The Albuquerques now sailed for Europe with valuable cargoes, leaving Edward Pacheco behind with three ships, and a hundred and fifty men, and this gallant officer defeated every attempt of the Zamorin to recapture Cochin, for which, on his return to Portugal, says an old writer, King Emanuel paid him the highest honours, and ordered one of the prelates of his kingdom to write a history of the war, which he transmitted to the Pope, and other Christian princes. As for the Albuquerques, Francisco sailed, on the 5th of February, with his three ships from Cannanore, but nothing more was ever heard of him or his squadron; but Alfonso, who left Cochin on the 25th of January, 1504, first proceeded to Mozambique, doubled the Cape on the 1st of May, and arrived at Lisbon at the end of July with the remainder of the squadron laden with very rich cargoes.

Emanuel was now resolved to acquire the Empire of the Indies, and, for this purpose, fitted out a fleet of thirteen large ships and six caravels or carvels, which he placed under the command of Don Francis Almeida, Count of Abrantes, with the title of Viceroy and Governor-General, the avowed object being the capture of Aden, Ormuz, and Malacca, by the acquisition of which he hoped to be paramount in the East. The fleet sailed from Lisbon on the 25th of March, 1505, and Almeida, having captured Quiloa and Mombaza, built forts there, and also at Anjidiva and Cannanore. In 1506, Almeida's son, Lawrence, discovered the Maldive Islands, and also visited Ceylon and took possession of it in the name of his sovereign. Almeida now divided his fleet into two parts, committing one squadron to the care of his son, on his return from Ceylon, and placing the second under Emanuel Pagayno; and no ship was permitted to visit the ports of the Malabar coast, without a pass from a Portuguese admiral or governor of a fort.

On the 5th of April, 1506, a fleet of fourteen ships sailed from Lisbon, under the command of Tristan da Cunha, Alfonso Albuquerque* being appointed second in command, with six ships and four hundred men, with secret instructions, as appears in his 'Commentaries,' that, at the expiration of three years, he was to succeed Almeida as viceroy. On the voyage out, they discovered the islands in South Atlantic, in 37° 6′ S. to which the name of Tristan da Cunha was given. The ships were greatly scattered, owing to the stormy weather, but Alfonso steered for Mozambique, which he had dis-

* For a life of this great man see his 'Commentaries,' translated by Walter de Gray Birch of the British Museum, from the Portuguese edition of 1774, which was compiled by his natural son Braz, from the despatches forwarded to Emanuel, King of Portugal. The English translation forms the volume of the Hakluyt Society for 1875.

covered on his first visit to India, where he was joined by the admiral with the other ships, except those of Alonzo Teleg, who proceeded to Melinda, and of Rui Pereira, who visited the island of Madagascar, then named St. Lawrence, after the saint on whose day it was first sighted. On the latter joining him with the news of his discovery, Da Cunha sailed with the fleet for the island, the southern portion of which he explored, and then returned to Mozambique. Having refitted his ships and sent Antonio de Saldanha with two vessels to Portugal, that officer, on the way, discovering a watering-place near the Cape, to which he gave his own name, the admiral sailed for Melinda, and then proceeded to Brava, which he attacked and secured. After some hard fighting at Brava, Tristan da Cunha was wounded, and, at his own request, was dubbed knight by Albuquerque, after which, we are told, he conferred a like honour on his son Kuno, and other hidalgoes. From thence the fleet proceeded to Magadoxa and the island of Socotra. At Tamirida (called Coco in the 'Commentaries'), where they anchored, the admiral expressed his intention to construct a fort and leave a garrison under Albuquerque's nephew, Alfonso de Noronha, but the native chief refused permission, upon which an attack was made upon his castle, which was stormed after a desperate resistance; in this affair both Albuquerque and his nephew were wounded, and many men were killed.

Da Cunha now built a fort ostensibly for the protection of the Christians,* and placed Alfonso de Noronha in

* Marco Polo says: 'The people are all baptized Christians, and they have an archbishop. Abulfeda writes that the people of Socotra were Nestorian Christians and pirates, and Nicolo Conti, who spent two months in the island early in the fifteenth century, says it was for the most part inhabited by Nestorian Christians.

command, and, on the 1st of August, 1507, sailed for India with four ships, leaving six behind under command of Albuquerque, 'and this not without many tears on either side,' says the chronicler. Having taken in cargoes, Da Cunha sailed for Portugal, where he arrived in safety, and his exploits on the East African coast, both as an explorer and conqueror, have been immortalised by Camoens, in his celebrated poem of the 'Lusiad.'

On the 10th of August, Albuquerque proceeded to Calayatt (Kalhat), between Ras el Had and Soor, and Curiarte (or Keriya), situated near a cape of the same name, a little south of Muscat, which he took by assault, capturing twenty-five guns, and burnt the town and thirty-eight vessels. Four days later he arrived off Muscat,* which he also captured after some severe

* Muscat was in possession of the Portuguese from A.D. 1508 to 1651, when they were expelled from all their possessions in Arabia by a simultaneous revolt of the Arabs. They fortified the place strongly, and built the forts Jillali and Marani; probably the others also are, in part at least, of Portuguese origin. In a Portuguese inscription over the inner gate of Marani is the date 1588, and in an old wooden gate at the custom-house, is cut 'Anno 1624.' Their expulsion from Muscat was effected by the Imam Sultan-ben-Seif, about A.D. 1651-52, but only through the treachery of a Banyan, Narootem by name, who was treasurer and general agent to the Portuguese, and whose daughter the commandant, Pereira, foolishly insisted on marrying. The crafty Banyan obtained his consent that the marriage should be postponed for a year, then he advised the commandant to clear out the water-tanks, to have all the powder restored, by being pounded anew, and the old supplies of wheat to be removed, to make way for new. The stratagem succeeded, and whilst the Portuguese were unprepared and lulled into fancied security, Narootem secretly communicated with the ruler of Oman, Sultan-ben-Seif, advising him to attack the place on the following Sunday. The Arabs came on that day, surprised and slew the Portuguese, and recovered the town. The same Imam, fired with his successes against the Portuguese, attacked Diu and Damaun, carrying off an immense booty. (See Hakluyt Society's 'Imams and Seyyids of Oman.')

fighting ; having burnt the city and thirty-four vessels, he embarked much spoil and sailed from Muscat.

So great was the terror of Albuquerque's name, that on the way he received the submission of the large town of Sohar on the Batna coast, where there was a strong fort having two towers ; he also captured, after severe fighting, another town called Orfacao, described as a large one, which was also burnt. Having rounded Ras Mussendom, Albuquerque arrived at Ormuz. He says in his 'Commentaries,' which are derived from his despatches to King Emanuel : 'The king detained all the ships in port, and added a force of sixty great vessels, having many soldiers and much artillery. Among them was one belonging to the King of Cambaya, called the *Meri*, of 1000 tons, with many men and guns, and another of 600 tons ; and besides these ships, there were in the harbour 200 galleons, long ships with many oars, not very large, but armed with two large mortars in the prow : and many *terradas* (shore boats) full of small guns and men wearing armour. On shore, too, there were about 15,000 or 20,000 men, very brilliant with their arms, and many of them on horses.'*

After much parleying, Albuquerque attacked the fleet, which he routed, capturing the *Meri* and several other ships by boarding. By his account, the slaughter was immense, for no quarter was given, and even the poor wretches swimming towards the shore were cut off and despatched, so that 'the sea was so tinged with blood, that it was a fearful thing to look at.' We are further told that 'one cabin-boy alone put to

* The description of the places captured by Albuquerque, and the resistance he met with, are doubtless much exaggerated. The Portuguese presumed upon the ignorance of their countrymen, as would appear from modern observation.

death eighty Moors,' and 'the gunners put many men to death.' Albuquerque was wounded while seeking to land at the jetty, but his victory was nevertheless so complete, that Khojah Attah, the minister of the king, Turan Shah, a boy of fifteen, sued for peace, and the young prince signed a treaty agreeing to pay an annual tribute of 15,000 xerafins to the King of Portugal, whose suzerainty he acknowledged, as well as 5000 xerafins for the expenses of the fleet, and permission to build a fort, the foundations of which were laid on the 24th of October. The fleet was now refitted, but the fort was not completed, owing to the hostile attitude of the people of Ormuz, and of Khojah Attah, who was encouraged by the numerical weakness of the Portuguese, who only numbered 460 men, and by the captains of their ships, three of whom deserted their chief and sailed for India. After some fighting at Ormuz and the neighbouring island of Queixome (Kishm), whither he went to take in water, Albuquerque, who was guilty of great barbarity in slaughtering men, women, and children alike, proceeded, in April, 1508, to Socotra, where he found the garrison suffering from the extremity of famine. In August he returned to Ormuz, but was not in sufficient strength to enforce the treaty, and, in the following December, arrived at Cannanore, where he found the captains who had deserted him in high favour with the Viceroy Almeida. The latter had received his letters of recall by a squadron of three ships from Portugal, having served the prescribed period of three years, but he took advantage of his superior strength to refuse to yield up his authority.

Desirous of revenging the death of his son, a gallant young officer, who had fallen in action with the Guzerat and Egyptian fleet, Almeida proceeded to the northward

with nineteen sail. Having captured Dabhol, the principal town on the Anjenwil river, he attacked and routed, with great slaughter, the combined fleet of the enemy, though the glory of the victory was dimmed by the massacre of all the prisoners. On his return to Cochin, Albuquerque again pressed Almeida to resign the government into his hands, but the latter refused, and even took the step of causing the successor appointed by his sovereign to be seized and thrown into the fort of Cannanore; however, on the arrival of Ferdinand Contighi, Grand-Marshal of Portugal, who was sent out with fifteen ships and 3000 men to put Albuquerque in possession of the government, Almeida sailed for Europe. On the 1st of March, 1510, he was slain, together with many of his men, at Saldanha Bay, in a quarrel with the natives.

Albuquerque now commenced his extraordinary career of conquest. With a fleet of thirty ships he attacked Calicut on the 2nd of January, and set fire to the town, but, while plundering the palace, Contighi and eighty men were killed and 300 wounded, among the number being Albuquerque. As soon as he recovered after this repulse, Albuquerque proceeded against Goa with twenty-one ships, and, having captured the city, entered it in state on the 17th of February, 1510. He placed as governor his nephew, Antonio de Noronha, who, however, was killed, and the place retaken by Kumal Khan, general of the King of Bejapoor, who attacked it with 60,000 men. Albuquerque now appeared off the city with twenty-three ships and 5000 fighting-men, and captured it with the loss of only fifty men, the enemy losing, it was said, 6000.

Albuquerque, who now harboured vast designs of conquest, on the 2nd of May, 1511, sailed from Cochin

with nineteen ships and 1400 men for Malacca, the prince of which, Mohamed by name, had, in September, 1509, treacherously detained some seamen of the squadron commanded by Sequelha, a Portuguese officer, who had sailed for Cochin on the 19th of August to make discoveries, and had returned to Portugal. The prince surrendered his prisoners but refused compensation, upon which, Albuquerque attacked the city by sea and land, and, though it was said to be defended by 30,000 men, carried it by storm, capturing immense booty. Having built a fort here, and received and sent embassies to Siam and Pegu, he left Rodriguez Patalino in command, and sailed, in the following year, for Cochin, but off Sumatra encountered a terrible storm,* in which he lost the greater part of his fleet.

Albuquerque now resolved to undertake the long-projected attack on Aden, a natural fortress which his practised eye taught him would form an important link in the chain which, extending from Brava to Malacca, would make Portugal the mistress of the East. Accordingly, on the 18th of February, 1513, he appeared before Aden with a fleet of twenty sail, having on board 2500 men, of whom two-thirds were Portuguese. But he had underrated its strength, and the great admiral had to retire discomfited from the walls of a place which yielded, in 1839, to a British force of four ships and 1400 men. Albuquerque now proceeded to the Red Sea, and, after remaining for some time at the Island of Kamaran, returned to India.

Early in 1514, he sailed with twenty-two ships from

* It is related of Albuquerque, that, his ship having struck on a rock, just as he was leaving her, he saw a young man fall from one of the masts into the sea, upon which he sprang overboard and rescued him at the imminent risk of his own life.

Goa, for the last time, on his memorable expedition against Ormuz ; on arriving before that place, in March, he forced the young king, Turan Shah, to accede to his terms—the surrender of the citadel and all his artillery, with an acknowledgment of the supremacy of the Crown of Portugal. While here, Albuquerque received an embassy from Ismail, King of Persia, and, having placed his relative, Pedro, in command, sailed for Goa, off which city he died, after a few days' illness, on the 16th of December, 1515, at the age of sixty-three.

This remarkable man—whose chief fault was his boundless ambition, for he was indifferent to personal aggrandisement, and, says Machado, 'his desire was more for glory than wealth'—had formed designs to divert the Nile into the Red Sea before it reached Egypt, so as to deprive the Egyptians of the trade, and to attack Mecca and plunder the tomb of Mohammed, with a small body of horse landed in the Persian Gulf—both rather chimerical schemes. Shortly before his death, his mortal enemy, Lopez Soarez, arrived from Portugal with thirteen ships, and, it was said, that his supersession and the denial by the king, his master, of the title of Duke of Goa, which he had solicited, conduced to his decease. He is said, on hearing of his supersession, to have exclaimed, after animadverting on the ingratitude of his king and countrymen : 'To the grave then, old man, for it is now high time : to the grave.' Albuquerque, who deservedly earned the title of 'Great,' was not only a great conqueror and a prescient statesman, but a distinguished navigator and discoverer, and it is in this light that his achievements are deserving of especial notice in this work. He is eminent not only as the founder of Portuguese forts and settlements at Goa, Calicut, Ormuz, Cochin, Cannanore, Socotra and Malacca,

but as the first European to sail on the waters of the Red Sea, and to explore the coasts from Brava to Malacca. His personal appearance is thus described by Diojo Barbosa Machado, in his 'Bibliotheca Lusitana Historica:' 'In stature he was ordinary, his face long and fresh-coloured, his nose aquiline, his aspect agreeable and made venerable by the white beard which reached down to his waist.' The likenesses of Albuquerque, of which we are cognisant, represent his countenance as Dantesque in its stony severity, like that of the weird, dumb boatman who piloted the dead Elaine in her last voyage to Arthur's palace:

> 'As hard and still as is the face that men
> Shape to their fancy's eye from broken rocks
> On some cliff-side.'

Fifty-one years after his death, his body was removed, in accordance with a request contained in his will, from Goa to Lisbon, where it was interred with great pomp on the 19th of May, 1566.

His successor, Soarez, quickly displayed his incompetence, for though he sailed to the Red Sea with a fleet of thirty-seven sail, he achieved no result, and returned to Goa with the loss of nearly one-third of his ships in a storm. The only memorable events in his viceroyalty were the visit for trading purposes of eight Portuguese ships to China, despatched in 1517 by Andrada, Governor of Malacca, and the agreement of the King of Ceylon, in the same year, to become tributary to Portugal and allow the construction of a fort at Colombo. The Portuguese retained possession of this island until the year 1657, when they were dispossessed by the Dutch, who had first begun to trade here in 1602, and who again were ousted by the British in 1796.*

* A Portuguese officer, Ribeyro by name, wrote the history of Ceylon in 1685, and presented it to the King of Portugal. The

The Portuguese had established themselves in many other places since their arrival in the East. In 1508, Diego Lopez de Sequeira first visited Sumatra, and it was not until the year 1596 that the Dutch, who later became its masters, made their first appearance. In 1511, the Portuguese, under Francis Serrano and Diego d'Abreu, discovered the Moluccas,* or Spice Islands. These officers had been sent on a voyage of discovery, and the former penetrated as far as Ternate, and the latter visited the islands of Amboyna and Banda. A Portuguese writer, one Argensola, gives a history of the Moluccas, where his countrymen remained eight years. On his return voyage Serrano lost his life.

The Dutch first began to trade with Ternate in 1599, and they assisted the native king to throw off the yoke of the Spaniards and Portuguese, the latter having, in 1580, lost their independence, and become subject to Philip II. of Spain, in which state they continued for sixty years, when the Duke of Braganza mounted the throne of Portugal as John IV. The first fort that the Dutch built in Ternate was Terlucco, and the second, Orange, which was captured by a British military and naval force in 1801. Portuguese settlements were also established at Tidor, Timor, and other islands, but they fell to the arms of the Dutch early in the seventeenth century, and, two centuries later, were captured by the British, though all conquests in this part of the world were restored at the peace in 1814.

From a work privately printed at Macao, in 1831,

island, during the one hundred and fifty years of its occupancy, had sixteen captain-generals, the first being Pedro Lopez de Souza, and the last, Don Antonio d'Amaral y Meneses.

* The Portuguese have laid claim to discovering the Ladrone Islands, because Magellan, who first visited them in 1521, was their countryman.

called the 'Canton Miscellany,' quoted by Sir John Davis in his excellent work on China, it appears that, in 1516, within a year of the death of Albuquerque, the Portuguese first made their appearance at Canton, where their mercenary greed did not give a very favourable idea of European character. In the previous year a vessel, under one Perestrello, had made its appearance at the mouth of the Canton river, and the venture being a commercial success, eight ships followed under the command of Perez de Andrada, who was permitted to proceed with two to Canton, where he successfully negotiated a trade. Some of his vessels returned with cargoes to Malacca; the remainder sailed in company with some junks, belonging to the Loo-Choo Islands, for the province of Foikien, on the east coast, and succeeded in establishing a colony at Ningpo. The Portuguese subsequently brought their families to that port, carrying on a profitable trade with other parts of China, as well as with Japan; but in the year 1545, the Provincial Government, provoked by their ill-conduct, expelled them from Ningpo. Shortly after Andrada's visit, his brother Simon established a colony and fort at Sanshan, near Macao (corrupted into St. John, and famous as the place where Francis Xavier, the 'Apostle of the Indies,' died in 1552); but was attacked and defeated by a Chinese force.

A strange chapter in the history of Portuguese relations with China, is that of the adventures of Ferdinand Mendez Pinto, who, at the head of a crew of desperadoes, plundered a quantity of silver from the tombs of seventeen Chinese kings, on an island north-east of Ningpo, but was attacked and compelled to retire. Being overtaken by a gale, only Pinto and thirteen Portuguese escaped with their lives, and were sent

prisoners to Nankin and Pekin, whence they were liberated by the Tartars, into whose service they entered, but Pinto ultimately found his way to Ningpo, whence he was taken off by a pirate, and driven by adverse winds to Japan. On his return to Ningpo, Pinto accompanied a large expedition to Japan, but his ship and others were wrecked on the Loo-Choo Islands, whence he returned to Malacca. Ultimately this pirate turned saint, and engaged in a mission to Japan.

The first European embassy to Pekin was that under Thomas Pirez, in 1520, the object being to establish a factory at Canton, as well as at Macao, but, owing to the feeling caused by the conduct of Simon de Andrada, Pirez was sent back to Canton, where he was thrown into prison and died. The Portuguese first established factories at Macao in 1537, but this place remained under a Chinese officer, called the Tso-Tang, and, in 1725, by an imperial edict, the number of vessels, Portuguese and Spanish, permitted to trade with Macao, was restricted to twenty-five, though it seldom numbered more than half that number.

In 1639, the Portuguese trade with Japan was stopped by an imperial edict, and when in the following year an embassy proceeded from Macao to Nagasaki, to plead for its resumption, its members to the number of sixty-one, including the envoy, Louis Pacheco, who had served with honour as commander of the Portuguese armies in the East Indies, and was seventy-eight years of age, were executed, their ships were burnt, and the survivors, thirteen in number, sent back to Macao.

In 1647, and again in 1685, they renewed their attempts to open a trade with Japan, but without success. Captain Alexander Hamilton, in his 'New Account of the East Indies,' where he remained from

1688 to 1718, mentions the Portuguese settlement at Ningpo, which he calls Limpoa, where they had about 1000 families settled and were governed by their own laws, but in consequence of their gross misconduct which he describes, they were 'banished Limpoa, and thus ended the most opulent colony at that time in the world.'

The most inveterate enemy the Portuguese had in the East were the Dutch, who, shortly after the formation of their trading company in 1602, began to contest with them the trade with the Moluccas and China, and when the Chinese refused their demands for equal trading privileges with their rivals, the Dutch Governor-General of Batavia, Jan Pieter Roenen, in the year 1622, collected a fleet of fifteen vessels, and assisted by two English ships, attempted to dislodge the Portuguese from their settlement at Macao, but was beaten off with an acknowledged loss of 130 men. But it was not until many years after this that the Emperor of China permitted the Portuguese to fortify Macao with regular works. In 1624 the Dutch formed a settlement in the island of Formosa, whence they were expelled in 1662 by Kohinga, and returned to Java.

In 1525, the great island of Celebes, or Macassar, as it is variously called from the two principal kingdoms in the island, was discovered by Antonio Britto and Garcias Henriquez, who had been sent from the Moluccas to make discoveries; though other Portuguese writers say that Britto, who had already earned notoriety by his having taken one of Magellan's ships a few years before, and murdered all the crew, did not go himself, but despatched vessels, when certain islands were sighted to which the name was given, and that Antonio Galvaon, or Galvaom, Governor of the Moluccas, sent over two

native Christians who baptized the princes and established relations with them. The Dutch eventually conquered the island of Celebes, and, on the 18th November, 1667, concluded a treaty with the king, in the 6th Article of which it is stipulated 'that they should banish the Portuguese from the kingdom, and exclude them from trade, as also the English, who are great mischief-makers, and the authors of the present war.'

In 1527, the Portuguese, under Captain Edward Correl, made a cursory examination of the coasts of Borneo, but Magellan's expedition had landed near the city of Borneo in 1521. De Barros says that Don Gorge de Meneses, who had left Malacca, on the 22nd August, 1526, with two ships and sixty men, for the Moluccas, instead of proceeding by the south of this island and of Celebes, the course always pursued, went round the north of Borneo, and, passing the north end of Gillolo, and then going to the south, came to land 200 leagues distant from the Moluccas, inhabited by people called Papuas — which Argensola says means 'black' in the native language. Meneses arrived at Ternate in May, 1527, having thus made the first discovery of New Guinea. Galvaom also mentions that Meneses, about this time, sent two ships, under Rocha, with Gomez de Sequeira as pilot, and they discovered some islands (in lat. 9° or 10°), which Captain Burney, in his 'History of the Discoveries in the South Seas,' thinks were part of the group now known as the Pelew Islands.

According to Galvaom, Governor of the Moluccas, who has written an account of the discoveries made by the Spaniards and Portuguese, the island of New Guinea was discovered, in March, 1529, by Alvarez de Saavedra, as he was returning to the Spanish possessions in

America from a voyage of discovery, and he called it the 'Isle de los Pintados, or Island of Painted People.*

The first European to visit the Philippine Islands was Magellan, in his memorable voyage of circumnavigation in 1521; but this group was not settled by the Spaniards until 1565, when Michael Lopez de Legaspi, a native of Mexico, colonised them under a commission from Philip II., after whom they were named. In 1558, however, we find that Galvaom, the able Governor of the Moluccas, under whose auspices so many important discoveries were made, sent Francis de Castro to the island of Mindanao, with which a considerable trade was established.

The first notice we have of Japan being visited by Europeans† since the time of Marco Polo, was in the year 1542, when, as already mentioned, Ferdinand Pinto, who himself gives an account of his visit, proceeded thither with two of his countrymen in a Chinese vessel from Ningpo. According to Galvaom, in the same year, Antonio de Mota and two other Portuguese seamen, deserting from their ship at Siam, embarked on board a junk bound to Nignpo (Liampo), but were driven by a storm to land in 32° N. lat., which was one of the southern of the Japanese group. Two years later, Alvarez Vaz, a Portuguese merchant, visited Japan, and persuaded one Angero to accompany him to Goa, when he was baptized by Francis Xavier, who, in 1549, proceeded to Japan with his convert and two missionaries. Pinto accompanied Xavier in his pro-

* See Harris's 'Voyages' for the account of the discoveries of the Portuguese in these seas.

† See Antonio Galvaom's 'Tratado dos Descobrimentos,' p. 94, and Kempfer's 'History of Japan,' book iv. chap. 5. The latter says that, according to the Japanese, the first European ship seen on their coasts anchored at Ana, opposite the island of Tsikok.

selytising mission, and, after the decease of Xavier, was sent thither for the third time in 1556, as ambassador from the Viceroy of the Indies. But the corruption and licentiousness of the Portuguese and the intrigues of the missionaries, so much at variance with the religion they professed, coupled with the representations of the Dutch, who had established a trade with these islands, that the object of their rivals was territorial acquisition, resulted, as already stated, in their total exclusion from the country in the year 1639, and in the subversion of Christianity, which had been largely adopted by princes and people. The Dutch and the English, who had established a factory at Firando, continued to trade with Japan, and the first of our countrymen to visit the country, in command of one of the East India Company's ships, was Captain Saris.

After the capture of Malacca, by Albuquerque, from the King of Johore, it became the richest of their possessions, after Goa and Ormuz, and was the seat of a bishop, the Cathedral Church of St. Paul being a fine edifice ; in the town were also five other churches, a college for the Jesuits, and a seminary for the converts, the whole being encompassed with a strong stone wall strengthened with bastions, and having a numerous garrison. However, in 1605, the Dutch attacked and destroyed the Portuguese fleet, consisting of thirty-four sail, and, four years later, captured Malacca after a siege of six months. The Dutch always displayed the most bitter hatred of the Portuguese, and in 1605, and 1607, made two unsuccessful attempts to capture the island of Mozambique ; even after the year 1640, when the crowns of Spain and Portugal were again separated, the Dutch prosecuted their designs, and though defeated in their attempts on Goa, in 1661 beat the Portuguese in

two naval engagements, and, two years later, attacked their possessions on the Malabar Coast, including Cochin, where they destroyed all the cinnamon, which, after the loss of Ceylon, had been a staple article of commerce. On the other hand, the Portuguese revenged themselves by driving out of Brazil, after a struggle of ten years, the subjects of the States-General, who had possessed themselves of that country.

The Portuguese power in the East, which rose so suddenly under the inspiring genius of Albuquerque, gradually declined after the death of that great man. His successor, Soarez, who, like Albuquerque, had failed in an attack upon Aden, was succeeded by James Lopez, who forced the King of Bantam to accept peace on his terms, but retreated from before Diu, in Guzerat, in February, 1521, though having forty sail under his command. A few months later, he was succeeded by Edward de Meneses, who achieved successes in the island of Sumatra, and sent on a voyage of discovery and conquest to the eastward, Henriquez and Britto, who captured one of Magellan's ships and erected a fort in the island of Ternate.

In the year 1521, John III. succeeded his father Emanuel, the greatest of Portuguese princes, who had raised his country to the pinnacle of glory, and one of his first acts was to appoint as Viceroy the aged Vasco de Gama, who died within a few months of his arrival at Goa, when the Viceroyalty devolved on Henry de Meneses. After a brief tenure he expired of an arrow wound in the year 1526, and was succeeded by Lopez de Sempayo, in whose time the Portuguese and Spaniards disputed regarding their rival claims to the Moluccas, the latter averring that Magellan was the discoverer, in 1521, under the orders of the Emperor

Charles V., and the Portuguese, that these islands had been visited, ten years before, by Anthony Abreu, who had been sent by Albuquerque to make discoveries, and was accompanied by Magellan. The people of Ternate sided with the Portuguese, and those of Tidor and Gillolo with the Spaniards, but ultimately, after much bloodshed, the emperor yielded up his right of the Moluccas to the King of Portugal.*

In 1527, the Viceroy Sampayo himself defeated the Guzerat fleet, off Choul, with great slaughter, and captured immense booty. Meantime, Nunho de Cunha arrived as viceroy, his brother Simon being admiral, and, on the way out, they captured Mombaza. At a later date, De Cunha received the surrender of the strong island fortress of Diu, which was committed to the charge of Antonio de Silveira. Soleiman the Magnificent, Sultan of Turkey, in an application from Bahadur Shah, Prince of Guzerat, who had sent emissaries, with presents, to Constantinople, soliciting aid against the Portuguese, despatched a fleet and army, a large part of the expenses of which was provided by Suleiman Pacha, a successful Greek adventurer, who received the command. Accordingly, Suleiman proceeded to Suez, and collected and equipped a fleet of seventy-two war vessels, on board of which, besides sailors and slaves, of whom he provided 1000, there were embarked 1500 Janissaries of the Royal Guard, 2000 Turkish regulars, and 500 Mamelukes, well officered and provided.

This formidable force left Suez in September, 1537, and, sailing down the Red Sea, committed great ex-

* According to Sir William Monson, in his 'Naval Tracts,' John III. of Portugal lent his brother-in-law Charles 5,350,000 ducats when he went to Italy to be crowned emperor, on condition that his possession of the Moluccas should be recognised till that money was repaid, which was never done.

cesses, and took Aden and hanged its ruler. Arriving on the coast of Hindostan, they were joined by eighty Guzerat ships and laid siege to Diu, but were repulsed, after a gallant defence, by the Portuguese governor, Silveira, who received relief from Garcia de Norunha, the new viceroy. The Pacha brought the greater portion of his fleet back to Suez, but, falling into disgrace, poisoned himself in order to escape from the executioner's hand. The Portuguese resolved to avenge themselves by attacking the Sultan's possessions in the Red Sea. On the death of Viceroy Norunha, the supreme command devolved on Estevan de Gama, second son of the great Vasco de Gama, a naval officer of distinction, and late Captain-General of Malacca.

He fitted out a fleet, and, among other officers to command it, selected Joao de Castro, a clever mathematician, and one of the ablest navigators of the age, who became one of the most distinguished and upright viceroys the Portuguese ever had in India. Some idea may be formed of the power of the Portuguese at this period, though within half a century of their first landing in India, when it is said that the armament consisted of seventy-two sail, twelve of which were warships of a large size, and the rest galleys, and on board 2000 picked soldiers were embarked. The naval command was confided to Joao de Castro, who started with the full intention of noting down everything that might occur on the voyage, calculated to promote the science of navigation and the commercial interests of his country ; and it is gratifying to add that a copy of this log-book now rests in the British Museum, among the Cottonian MSS.*

* The copy in the British Museum is a large quarto volume, consisting of sixty folios, originally numbered in red ink. It now only

The Portuguese fleet left the Goa anchorage on the 1st January, 1541, and proceeded up the coast for the double purpose of overawing the native chiefs opposed to the Portuguese, and crossing the Indian Ocean at its narrowest part, in consequence of which detour they did not reach the island of Socotra till the 13th. Having taken in water, they left on the 20th, and on the 27th appeared before Aden, of which place Castro furnishes an historical sketch, with a view of the coast and harbour. The following day they anchored at the mouth of the Straits of Babelmandeb, when the naval commander sounded the channels, establishing the position of the rocks and shoals as a guidance for the several captains. As soon as the fleet had passed Mocha, they steered for the opposite coast, and, on the 8th February, anchored in front of the island of Dallaqua, or Dhalac, of which Castro gives a short description. On the 11th,

contains fifteen drawings or descriptive maps, the one of Aden having been torn out. The edges of the work are much burnt, no doubt during the calamitous fire which befell Sir R. Bruce Cotton's library in 1731, whereby the marginal notes were mostly destroyed, and the text in some places partially defaced. The maps were also severed in two at the foldings. The volume has, however, since been bound in calf with gilt lettering, and bears the Cottonian arms upon it. Each sheet has also been pasted upon a separate piece of paper, by which means the blank margins have been restored. A new enumeration of the folios has also been added, now amounting to ninety. The work is closely written, in a fair hand, but with numerous abbreviations, and in the old orthography, which render it rather difficult to decipher; and at the end, on a scroll, are these words, '*Gaspar Aloisius scribebat MDXLII.*' The narrative is preceded by the dedication already mentioned in large letters, imitating the Roman character. The initials to descriptions and headings are in red ink, and the capitals occasionally flourished. The drawings are curious, and besides showing the configuration of the coast and surrounding hills, describe the aspect of the country, and mark the spots where camels, lions, horned cattle, and deer were seen. They also represent the Portuguese vessels as they appeared when at anchor and under sail. (See an account of this valuable MSS. in the 'Asiatic Journal,' vol. xlv.)

the oared galleys had reached the island and port of Massowah, where, next day, they were joined by the heavy vessels and found a good harbour. Castro describes this spot as well as the coast and watering-place of Arkeeko, remarking that, according to a local tradition, it was in this port, Sheba, Queen of Ethiopia, embarked when she went to visit Solomon. Here he left the large vessels and proceeded up with the smaller ones, consisting of sixty-four row-galleys, three galliots, eight long-boats, and fifty-three pinnaces.*

On the 18th the Portuguese left Massowah, and, on the 23rd, arrived at Souakim, which, being one of the strongholds held by the Turks, was pillaged and burnt. The fleet did not leave Souakim till the 10th March, a delay which, in the end, proved fatal to the main object of the enterprise, as the garrison at Suez received timely notice of their approach, and besides adopting the precaution of dragging their galleys high up on the strand, in the interval obtained reinforcements of troops from Cairo and other places. On the 21st, the Portuguese entered the harbour of Toro, where, Castro contends, Solomon had the vessels built which he periodically sent to Tarshish and Ophir. After driving the Turkish garrison out of this town, agreeably to his powers and the usage of the age, the Viceroy de Gama conferred the honour of knighthood on several gentlemen at the foot of Mount Sinai.† The Portuguese left Toro on the

* The military and other details of this expedition, omitted by Castro, are supplied by Diego de Couto, who continued Barros' 'Decadas da Asia,' Lisbon, 1553, and also in the chronicle of John III., by Francisco de Andrada.

† Among them was the eldest son of Joao de Castro. Estivan de Gama died in Portugal, and was interred in the church of the Carmelite Convent at Vidigueira. On his tomb is inscribed an epitaph to this effect: 'He who made knights at the foot of Mount Sinai, hither came to end his days.'

22nd, and on the 25th, being near the isthmus of Suez, observed a large body of infantry and cavalry exercising on a plain. While passing a point of land, defended by a bastion, the Turks fired at them, but, forcing the passage, they entered Suez harbour, and caught sight of the Ottoman fleet, nine war-ships and four galleys, hauled high up on the beach, on the other side of the houses, and defended by redoubts recently constructed. As De Gama was about to land his force, 2000 Turkish cavalry and infantry made their appearance from behind a hill, and seeing other preparations for a formidable defence, the viceroy recalled the troops, and abandoned the enterprise. On the 29th April the Portuguese accordingly withdrew, and retracing their steps, arrived at Goa on the 21st July, after an absence of seven months and twenty-one days. This voyage is of special interest as being the first in which a European fleet traversed the Red Sea.

In 1545, Mahommed, the Guzerat King, again laid siege to Diu, which held out for many months until the arrival of the Viceroy John de Castro, who routed the enemy by sea and land with great slaughter. The Portuguese were supreme at sea from Guzerat to Cape Comorin, until the arrival on the scene of the Dutch and English. In a curious account of the East Indies, in 1639, by J. A. de Mandelsloe, he speaks of the formidable fleet the Portuguese possessed, even after their loss of Ormuz had inflicted a severe blow on their maritime supremacy. When he visited Goa in that year, he says the flag-ship, called the *Bon Jesus*, carried sixty-four guns and 600 men. But they declined as a military power, and the blow inflicted on them by the Mahrattas reduced them to a condition of impotency. In 1737 these fierce warriors captured Tanna and

Tarapore, and, two years later, Bassein fell to their arms after a defence by De Pinto, who was killed, and his successor, De Souza Pereira, worthy of the best days of Portuguese chivalry. On the 27th September, the remnant of the garrison was convoyed by a squadron of company's ships from Bombay to Choul, and thence returned to Goa. *Finis Poloniæ!* Thus ended Portuguese supremacy in India, which from that day became the decrepit power we now see it, only living on sufferance, and an object of contempt even to the petty Native States adjoining its settlements, which are confined to Goa and the neighbouring territory, Diu and Damaun. The dominion of the Eastern Seas was now transferred from the Tagus to the Thames:

> 'On whose each tide, glad with returning sails,
> Flows in the mingled harvest of mankind.'

CHAPTER X.

The Early Voyages of the English East India Company—Formation of the Dutch Settlements in the Far East—Brief History of the French East India Company—Voyage of Commodore Beaulieu—Rise and Progress of the French, Danish, and Swedish East India Companies.

In the last year of the sixteenth century, the English East India Company was formed, but, before that event, three voyages of the first importance had been made to the Indies by those adventurous Englishmen, Drake, Cavendish, and Lancaster. In 1591 took place the first English expedition to the East Indies for trading purposes. On the 10th April, in that year, three ships sailed from Plymouth—the *Penelope*, Captain Raymond; the *Royal Merchant*, Abraham Kendal; and the *Edward Bonaventure*, James Lancaster, after whom the sound near Greenland was named.* On 1st August, they reached Saldanha Bay, whence the *Royal Merchant* was sent home with the sick, and, near Cape Corricrtes, the

* Two accounts of this expedition have been written, the first by Hakluyt from Lieutenant Edward Barker, and the second by Henry Way. Both were published by Hakluyt, and appear in the volume of the Hakluyt Society for 1877, edited by Mr. Clements Markham. Richard Hakluyt, it should here be noted, completed his 'Principal Navigations' in 1600, when he was appointed to the charge of the East India Company's historical and geographical documents, which he held until his death in 1616. He was appointed Archdeacon of Westminster in 1603.

two other ships parted company in a gale, when the *Penelope* was never heard of again. Lancaster, proceeding on, lost several men in a treacherous attack of the natives on the East Coast of Africa, while trying to procure water, and, thence sailing to Cape Comorin, which he rounded in May, 1592, visited the Nicobars and the coast of Malacca. At this time the crew was reduced to thirty-three persons, but they nevertheless succeeded in making some important captures of Portuguese vessels. Lancaster now sailed to Ceylon, but here the crew mutinied and insisted on returning round the Cape. In the following April, they arrived at St. Helena, and thence proceeded to the West Indies.

On the 20th November, 1593, while Lancaster, Barker, and seventeen men were on shore at Nuna, a small island between Puerto Rico and San Domingo, searching for provisions, the carpenter cut the ship's cable, and she drove to sea with five men and a boy. After twenty-nine days' stay here, they were taken on board by some French vessels, and went to San Domingo, whence, on the 7th April, 1594, they took ship for Dieppe and landed at Rye on the 24th May. In the following October, Lancaster proceeded to sea with three ships and a galley, with 275 men, and, in a successful attack on the Portuguese settlements at Pernambuco, Edward Barker, his second in command, and thirty-five men, were killed. The expedition, of which an account is given by Hakluyt, returned to Blackwall in July, 1595.

Four years later, the report of Dr. Thorne, an English merchant residing at Seville, on the advantages of trade with India, and giving information including that obtained from Lancaster after his first voyage, led to the formation of the East India Company by some London

merchants, who subscribed £30,000, and four ships were purchased and fitted out. Queen Elizabeth gave her sanction on the 16th October, and, on the 31st December, the charter of incorporation was granted, conferring the exclusive privilege of trade to the East Indies for fifteen years, to the Earl of Cumberland and 218 knights, aldermen, and merchants, by the name of 'the Governor and Company of the Merchants of London trading unto the East Indies.' Alderman Sir Thomas Smith was elected the first Governor, and with him were associated twenty-four directors.

As the ships of the East India Company made no discoveries, only a brief summary of their voyages is here necessary. Though it was owing to the enterprise of Portuguese navigators that the trade of the Indies was called into existence, the valour and superior skill of the seamen in the service of the East India Company wrested from them the fruits of their enterprise:

> 'To Britons full
> The goddess spreads her stores, the secret soul
> That quickens trade, the breath unseen that wafts
> To them the treasures of a balanced world!'

The first expedition, which sailed from Woolwich on the 13th of February, 1600 or 1601, according to the present method of reckoning, consisted of the *Red Dragon*, 600 tons, 202 men, Captain James Lancaster; *Hector*, 300 tons, 108 men, Captain John Middleton; *Ascension*, 260 tons, 82 men, Captain William Brand; *Susan*, 240 tons, 88 men, Captain John Hayward; and the victualler *Guest*, 130 tons, which was abandoned on the voyage. On the 9th of September, the squadron reached Saldanha Bay, the losses by sickness being no less than 105 men. On the 1st of November, the Cape was doubled; on the 9th of May, 1601, they arrived at

the Nicobar Islands ; and, on the 6th of June, they cast anchor at Acheen, on the north-west extremity of Sumatra. Captain Lancaster, having made a treaty with the king, proceeded on a privateering cruise in the Straits of Malacca, and captured a Portuguese carrack of 900 tons, having a valuable cargo. As Sir William Monson says in his 'Naval Tracts' (see Churchill's 'Voyages,' vol. iii. p. 231), 'Lancaster's employment was as well to take by violence, or to trade by sufferance.'

The *Ascension* left Acheen for England with a cargo of cinnamon, pepper and cloves, on the 9th of November, and Captain Lancaster, leaving the *Susan* at Priaman, in Sumatra, with orders to proceed to England when she had completed her cargo, sailed for Bantam on the north-west extremity of Java. Having established a factory and friendly relations with the king, he sailed, on the 20th of February, for England, with a full cargo of pepper. On the 11th of September, 1603, both vessels anchored in the Downs, the *Susan* and *Ascension* having already arrived.* By this most successful voyage, for which Captain Lancaster was knighted, a profit of 95 per cent. was made and two factories were established.

On the 23rd of March, 1604, the second expedition, consisting of the same ships, sailed from Gravesend under Captain Henry Middleton, who was knighted on his return on the 6th of May, 1606. In this voyage,

* The original MS. of this voyage is lost, but Purchas gives an account in his 'Pilgrimes,' which has been reprinted in the journal of the Hakluyt Society for 1877. Purchas, it should be mentioned, succeeded Hakluyt in charge of the journals of the voyages of the East India Company's ships in 1620, and five years later published his abridgment of these journals and logs in four volumes under the title of 'Hakluyte's Posthumus', or 'Purchas, his Pilgrimes.' Purchas died in 1626, and after his death the MSS. were suffered to go to decay, or were abstracted.

of which an account was published in that year, and again in the volume of the Hakluyt Society for 1855, the ships proceeded to the Moluccas as well as Bantam, and, though the *Susan* was lost on the way home, the profits were enormous. On the 12th of March, 1607, the third expedition left Gravesend. It consisted of the *Dragon*, Captain Keeling, an experienced seaman, who had commanded the *Hector* in the previous voyage on the death of Captain Stiles; the *Hector*, Captain Hawkins; and the *Consent*, of 115 tons, Captain David Middleton. On the 17th of December, the *Dragon* and *Hector* visited Saldanha Bay; on the 19th of February, 1608, they put into St. Augustine's Bay, in Madagascar, and, after visiting Socotra, where they separated in June, Captain Hawkins proceeded to Surat in the *Hector*, which was thus the first English ship to visit India, and Captain Keeling sailed for Priaman, and anchored at Bantam on the 5th of October. While here he was joined by the *Hector*, which arrived under command of the chief officer, Captain Hawkins having decided to remain at Surat, where he found the prospects favourable for establishing a factory. This enterprising officer proceeded to Agra, and presented a letter from his sovereign, James I., to the Mogul emperor, Jehangire, who, however, after promising to permit the English to establish a factory at Surat, cancelled the concession and left Captain Hawkins to find his way back to the coast. Captain Keeling, having sent the *Dragon* to England, on the 1st of January, 1609, proceeded in the *Hector* to the Moluccas, and thence returned home, arriving in the Downs on the 9th of May, 1610.

The fourth expedition, which sailed in 1608, consisted of the *Ascension*, Captain Sharpeigh, and *Union*, Captain Rowles, and was unfortunate, the former ship being

wrecked in the Bay of Cambay; the *Union* was afterwards met at Madagascar by Sir Henry Middleton, in 1610. The fifth voyage was made by the *Consent*, Captain David Middleton, which brought home a valuable cargo of cloves. The sixth expedition consisted of the *Trade's Increase*, of 1100 tons, Sir Henry Middleton, who had made the second voyage; the *Peppercorn*, Captain Downton, and the *Darling*. The squadron sailed from the Downs, on the 4th of April, 1610, and visited Socotra, whence Sir Henry Middleton despatched the *Peppercorn* to Aden, and himself proceeded to Mocha; here he and many of his men were made prisoners, but at length they recovered their freedom, and the ships sailed to Surat, which was reached on the 26th of September, 1611.

The Portuguese offered great opposition to the English trading at Surat, whence, after embarking Captain Hawkins on his return from Agra, Sir Henry Middleton sailed for the Straits of Bab-el-Mandeb, where he was engaged in 'romaging' Indian vessels, that is, forcing them to sell goods at his price, and then proceeded, in the *Peppercorn*, to the Moluccas, where he died, it is said, of disappointment on learning that the *Trade's Increase* had been lost on a coral reef. In the meantime, the eighth venture, consisting of three vessels, the *Clive*, *Hector*, and *Thomas*, sailed from England on the 18th of April, 1611, under the command of Captain Saris, who, after participating in Sir Henry Middleton's piratical proceedings at the entrance of the Red Sea, sailed for Japan, and, on the 11th of June, 1613, cast anchor at Firando, where, notwithstanding the opposition of the Dutch, he received permission to establish a factory.

The trade with Japan was relinquished about the year 1624, but, in 1673, an endeavour was made by the

Company to revive it, as appears from an account inserted by Scheuchzer in an Appendix to Kempfer's 'History of Japan,' being an extract from a sea journal found among the papers of Sir Robert Southwell. In a short preface to this account, Scheuchzer says: 'I cannot find that any attempt to revive the trade was made till the reign of Charles II., in the year 1673, the journal of which undertaking I have thought fit to annex to this work.' The extract from the journal, which then follows, commences with the arrival of the ship at Nagasaki, in June, 1673, and breaks off on her departure in the ensuing August.

As Captain Hawkins commanded the first English ship that arrived in India, and Captain Saris the first in Japan, so Captain Anthony Hippon, of the *Globe*, on the seventh voyage, was the first to visit the Coromandel coast, whence he sailed for Bantam, Patanny, on the east coast of the Malay peninsula, and Siam; having established factories here, he revisited Masulipatam and Pulicat, and returned to England. The so-called ninth voyage consisted of the *James*, Captain Marlowe, which also formed part of the tenth expedition, under that gallant seaman, Captain Best, consisting of the *Hoseander*, *Hector*, *James*, and *Soloman*, which sailed from Gravesend on the 1st of February, 1612. On arriving at Surat, Captain Best established the first British factory in India, having secured a regular firman from the Mogul Emperor, and, on the 29th of November, his squadron being threatened by a Portuguese fleet, which arrived to expel the intruders, he attacked them with spirit, and, he says, drove 'three of their four ships aground on the sands.' Jehangire, impressed by their spirit, expressed his willingness to secure the alliance of the English, and entered into a regular treaty, giving

full freedom of trade, which was delivered, with much formality, to Captain Best on the 6th of February, 1613.

The East India Company now sent out squadrons every year, and that commanded by Captain Downton, which sailed in March, 1613, consisting of the *New Year's Gift*, *Hector*, *Merchant's Hope*, and *Soloman*, is memorable for the great victory it achieved in Swally Road, near Surat, in January, 1615, when the English ships beat off a large fleet, under the command of the Viceroy of Goa, with the loss of 350 men. Downton died at Bantam on the 6th of August in this year, greatly regretted as a gallant officer and fine seaman.

Other ventures of importance were the twelfth, consisting of the *Expedition*, Captain Newport, which sailed, in 1612, with the Persian Ambassador, Sir Robert Sherley; that of Captain Walter Payton, who commanded a fleet which, in 1614, took out Sir Thomas Roe as ambassador to the Mogul Emperor, at whose court he remained for four years; and that of Captain Andrew Shillinge, in 1620-22, consisting of the *London*, *Hart*, and *Roebuck*, in the course of which the commander was killed in a fight with the Portuguese, as was also William Baffin, the eminent Arctic explorer, who, says Purchas, 'dyed in the late Ormuz businesse, slain in fight with a shot, as he was trying his mathematicall projects and conclusions.' The 'Ormuz businesse,' here referred to, was the capture of the famed island of that name from the Portuguese in the year 1622. This was effected by a squadron of four Company's ships and two 'pinnaces,' as the smaller sea-going vessels were called, under Captains Weddell* and Blythe, acting in con-

* Captain Weddell was an officer of great enterprise and spirit. In 1637, with four ships—the *Dragon*, *Sun*, *Catherine*, and *Ann*—he arrived in China, being the first English seaman to make his appear-

junction with an army of Shah Abbas, the King of Persia.

By this victory was brought to a close the dominion of the Portuguese in the Persian Gulf, where they had been supreme since the days of the Great Albuquerque. From that day the Island of Ormuz, which for a century had been an emporium of trade in the East, and the wealth of whose merchants is attested by the well-known lines of Milton, became a desert, barely giving subsistence to a few fishermen. The traveller, who stumbles over the ruins which may still be traced in the salt-incrusted plain, can scarcely credit the truth of the existence of a state of grandeur such as is described by the expression, 'the wealth of Ormuz or of Ind,' and the statement of the Abbé Raynal, who avers that 'at the time of the arrival of the foreign merchants, it offered a more splendid and agreeable scene than any city in the East.' By the terms of the treaty concluded with the King of Persia, the East India Company were permitted to establish a factory at Gombroon, now named Bunder Abbas, on the coast of Persia, opposite Ormuz, but they were defrauded of the moiety of the customs of that port, settled upon them for the assistance afforded by their ships.

In 1628, the Company's agents established a factory at Madras, where they erected Fort St. George, which was created a Presidency in 1653-54, though subordinate to Surat, where resided the President of Council. At this time they had stations at Bunder Abbas and

ance in that country with which our commercial relations are now on such a vast scale. Being hindered in his endeavours to open up a trade with Canton, Captain Weddell proceeded up to the Bogue forts, which opened fire upon him with forty-six guns, upon which the gallant seaman cannonaded the forts, and, landing 100 sailors, took possession of them.

Bussorah, at Mocha, and at Agra, Ahmedabad, Scinde, Rajahpore, Carwar ; also agencies at Cossimbazar, Ballasore and Patna, subordinate to the factory at Hooghly, which again was placed under the Presidency of Fort St. George. They still retained the stations at Bantam and other points in the Eastern Islands, the importance of which, however, gradually waned, but the factories at Massulipatam and Pulicat, on the Coromandel coast, formed by Captain Hippon, were abandoned. In the year 1651, the privilege of free trade in Bengal, with exemption from custom dues, was obtained for the Company by Mr. Broughton, surgeon of the Surat factory, from the Emperor Shah Jehan, for saving the life of his daughter ; and thus, through the public spirit of a medical officer, the company obtained their first footing in Bengal. A little later they became a territorial power in India, by the acquisition of the Island of Bombay, which had been acquired by Charles II., on his marriage with the Infanta Catherine of Portugal. Finding the settlement unremunerative, by letters patent, dated 27th of March, 1668, the king transferred the island to the East India Company, whose agent at Surat, Sir George Oxenden, took formal possession on the 23rd of September following.

In 1702, the old Company, known as the London Company, and a rival Association, called the English Company, whose quarrels had nearly reduced both to ruin, amalgamated, and, by Act of Parliament, assumed the title of 'The United Company of Merchants Trading to the East Indies.' But it needed the genius of a great man to weld the scattered factories and forts into a territorial power, and such a one appeared in the person of Robert Clive, who went out to Madras as a writer in the year 1744. His heroic defence of Arcot,

seven years later, and his victory at Plassy, in 1757, are memorable instances of the military genius which gained for him, from the elder Pitt, the title of the 'heaven-born General.' Long ere this England had asserted her position as the inheritor of the glories of the maritime states, Phœnicia, Carthage, and Venice, and her ships, bearing the spoils of commerce, were found on every sea, in every clime, and in worlds never dreamt of by Alexander or Cæsar.

> 'All my dread walks to Britons open lie.
> Those that refulgent, or with rosy morn,
> Or yellow evening, flame; those that, profuse,
> Drunk by equator suns, severely shine;
> Or those that, to the poles approaching, rise
> In billows rolling into Alps of ice.
> E'en yet untouched by daring keel, be theirs
> The vast Pacific: that on other worlds
> Their future conquest rolls resounding tides.'

The East India Company's Charter was renewed from time to time, but, in 1833, it finally ceased to be a commercial corporation, and when, on the 22nd April, 1834, its monopoly of trade with China closed, the Great Company's mercantile marine was disposed of. Twenty-four years later its political extinction was decreed, and the Company Bahadur gave place to the direct authority of the Queen, who, on the 1st January, 1877, assumed the Imperial title, this being the last phase in the marvellous story of the acquisition of our Eastern Empire. When and how soon another change may supervene in our relations with India, he would be a bold man who ventured to predict, as nothing in that country is so sure of happening as the unforeseen. However this may be, the world has never afforded a more extraordinary instance of the superiority of race, and when we regard its extent from Kurrachee to

Tenasserim, taken in conjunction with its population, a quarter of the human race, dependent or tributary, our Indian Empire is superior in grandeur to the empires of Alexander and Augustus Cæsar.

A record of navigation would not be complete without a slight sketch of the East India Companies of the European Powers. During the seventeenth century, Portugal, Holland, France, Sweden, and Denmark, attempted to compete with England—not unsuccessfully as regards the two first-named Powers—for the trade of the East Indies, and it was not until the following century that this country had established a decided preponderance over these States. First Portugal yielded, then Sweden and Denmark retired from the field; Holland remained only in Java and the Eastern Islands, while Spain also maintained herself in the Moluccas and Philippine Islands. France never rivalled us as a commercial Power in the Indies, but she struggled desperately for empire, and not until the treaty of 1783 did we establish our superiority. During the Revolutionary war, her ships of war and privateers preyed on our commerce; but the capture of Mauritius and Bourbon finally broke her power for offence in the East.

In the last decade of the sixteenth century, the Government of the Netherlands founded the Dutch East India Company, of which an account is given by Harris, in his interesting and voluminous old work. The Company received its charter in the year 1595, and Houtman proceeded with four ships to the Indies, by the Cape of Good Hope, returning after an absence of two years and four months. The Company were now joined by some Amsterdam merchants, and, in 1598, James Van Uck sailed from the Texel with eight ships. In the

following year, squadrons sailed from Amsterdam and Zealand, and, in 1601, no less than thirteen ships sailed from the Texel, under James Heemskirk, and eight of these ships encountered and repulsed thirty Spanish sail sent out to destroy them. The Dutch trade to the Indies prospered greatly. In 1613-14, they fitted out twenty-seven ships, and established factories at Surat and Amboyna, their capital at this time—the seat of Government not being removed to Batavia until some years later—and the scene of the massacre of Englishmen, in 1622, of which, and the tortures inflicted on the victims, Harris gives a detailed account in his history of the rise and progress of European trade with the East Indies.

The Dutch ships chiefly traded to Acheen, where Cornelius Houtman lost his life, in 1600, in defending his ships against an attempt of the native king to seize them; and with this portion of Sumatra also the Portuguese and the English East India Company, at a later date, had business relations. But the captains of the rival companies, though their governments were at peace in Europe, carried on war, and we find that the Dutch navigators were commissioned, by Prince Maurice of the States-General, to attack the Portuguese and Spaniards, whose chief settlements were at the Moluccas and the Philippines; and to contest for the China trade with the former State, whose Eastern possessions included Ormuz, Goa, Malacca and Macao, while their commerce was greater than that of any other power.

That renowned seaman, James Heemskirk, captured a rich Portuguese carrack returning from Macao, and the Dutch took Machian, one of the Moluccas, though they suffered some reverses at the hands of the Portu-

guese, who beat off Van Uck; and Juan de Sidon, Governor of the Moluccas, defeated a Dutch squadron of four sail on the 25th of April, 1610, capturing three of them. However, six years later, the Dutch, under Admiral Verpagen, captured or sunk four Portuguese ships, and, assisted by the English, drove the Spaniards out of the Moluccas. They also made many other conquests in this century.

In 1622, Jan Peter Koenen, Governor of Batavia, collected a large force for the capture of Macao, which had been unsuccessfully attempted some years before. He appeared before the city, on the 22nd of June, with fifteen Dutch and two English ships, and landed a strong force, but was beaten off with an acknowledged loss of 130 men, or, as the Portuguese say, 300. Sailing for Macao, the fleet anchored at Pehou, an island of the Pescadores group, between the coast of China and the island of Formosa. Here the Dutch established themselves and interrupted the trade between Macao and Japan, and between Manilla and China, and, in April, 1624, the Government of Pekin sent a force to dispossess them. A peace was now concluded between the rival parties, and in the latter part of the year the Dutch evacuated Pehou, and took possession of the harbour of Tayowan in the western part of Formosa. Here they erected forts, and, in 1650, held Forts Zealand and Province at Tayowan, and other settlements on the north of the island, but ten years later, these latter were withdrawn, and the Dutch concentrated at Fort Zealand, which was held by a garrison of 1500 men, the governor, Coyet, having also twelve ships from Batavia. These were, however, sent away, and the governor was superseded in June, 1661. On the departure of the fleet, Koshinga appeared before Fort Zealand with

20,000 men, and although the place was reinforced from Batavia, the Dutch were compelled to surrender after a siege lasting nine months, during which they lost 1600 men. Koshinga now became independent sovereign of the island, but in 1683 it was surrendered by his grandson to the Manchoo Tartar dynasty.*

In 1631, assisted by the King of Johore, the Dutch captured Malacca, and, in 1653, the Cape of Good Hope, both in the occupation of the Portuguese; but these conquests, as also Ceylon, Java, and all the neighbouring possessions and islands under the authority of the Government of Batavia, were captured by British Military and Naval Expeditions. The interests of India were in those days made subservient to those of England, and, by the terms of the treaty of 1814, the East India Company surrendered Java, the Moluccas, and other settlements they had acquired with the expenditure of much blood and treasure, the British Government retaining only Cape Colony and Ceylon. Chinsurah, situated twenty miles north of Calcutta, where Colonel Forde, under Clive's orders, defeated the Dutch in 1759, was exchanged in 1824, with other places in India, for the British possessions in Sumatra, and thus the Dutch connection with India finally ceased. That the Dutch trade to the East Indies was at one time very lucrative, may be gathered from the statement of Harris, in his succinct history of the rise and progress of the Dutch East India Company, wherein he states that upon the original capital of £650,000, employed in this trade, the dividends had been eighteen millions sterling up to the year 1728.

* See Admiral Burney's 'Voyages and Discoveries in the Pacific Ocean,' vol. iii. p. 238.

Early in the eighteenth century the Ostend East India Company was formed. When the Spanish Low-Countries were ceded, by the treaty of Rastadt, to the Crown of Austria, the Emperor Charles VI. granted letters patent to the merchants of Ostend to trade with the East Indies. In 1720 they equipped five large ships, and the following year, six, three being for China, one for Mocha, another for Surat and the Malabar coast, and the sixth for Bengal. Of this squadron, one ship was seized by the Dutch, and another by an English privateer off Madagascar, but four others returned in safety, and their cargoes were disposed of at great profit. The Emperor of Austria, notwithstanding the protests of the French, Dutch, and English Governments, by virtue of his title of King of Spain, now conferred on this Company a regular charter, dated August, 1723, granting them special privileges for trading to the East and West Indies and coast of Africa for thirty years, and fixing their capital at six millions of florins. At length, after many negotiations and much intrigue, the emperor, under date May 20, 1727, suspended the charter of the Ostend Company for seven years, and thus the maritime powers gained their point, and a general war was averted.

We have already briefly traced the steps by which Portugal attained to such a height of grandeur under her Viceroys, Almeida and Albuquerque. Within twenty years of De Gama's adventurous voyage, she had established herself at several important points between Socotra and Malacca, and her flag was paramount alike in the Indian Ocean, in the Red Sea and Persian Gulf, and the Bay of Bengal. But there was a gradual decline during the sixteenth century, and, though she gained a footing in China by the occupation of Macao, her loss of Ormuz,

in 1622, inflicted a blow on her prestige from which she never recovered, and from that date British supremacy, as represented by the ships of the English East India Company, was established, and we seized the rod of Empire as it fell from the hands of the successors of Albuquerque. True they struggled gallantly before they bowed to the inexorable decree of fate, and the heroic defence, in 1739, of Bassein against the Mahratta army, by Pereira and De Pinto, who perished sword in hand, in the breach, described in the pages of Captain Grant Duff's history of that warlike Hindoo confederacy, is well-nigh as brilliant an achievement as any recorded in military history; but all was in vain, and, when the broken remnants of the Portuguese garrison returned to Goa, escorted by a squadron of Company's ships, the commodore expressed his commiseration at the sad condition to which so many brave men had been reduced. The Portuguese settlements in India are now limited to Goa, Anjidiva Island, fifty-one miles south-east of that city, Diu, and Damaun, all on the west coast.

The French East India Company was founded under the auspices of that greatest and most sagacious of French monarchs, Henry IV., and within a few years of the formation of the English Company by his contemporary, the greatest female sovereign this island has known. Francis I., by his proclamations of the years 1537 and 1543, had exhorted his subjects to emulate their neighbours, the Portuguese and Spaniards, in long voyages for purposes of commerce and discovery, by which these nations had benefited so largely in prestige and wealth, and Henry III. also issued an edict, dated December 15, 1578, but without avail, and the only notable voyages made by a French navigator, in this century, were those undertaken by Cartier, in 1534 and

1535, by which Francis I. acquired the countries about the St. Lawrence, to which that navigator gave the name of New France, but which are now known as Canada.

On the 1st of June, 1604, Henry of Navarre issued a decree constituting the French East India Company, and granting them exclusive privileges for a period of fifteen years, but the merchants failed to raise the necessary funds. Again, through the exertions of the promoter, a Dutchman, named Gerard Le Roy, a second company was constituted under letters patent of Louis XIII., dated March 2, 1611; but difficulties again interposed, and it was not until a third company, constituted by their amalgamation, was formed, four years later, that active steps were taken to trade with the East Indies. An expedition was fitted out, and a settlement was made on the island of Madagascar for commercial purposes, but the venture ended in failure, as the trade was inconsiderable, and the Company became involved.

Especially interesting is the voyage made at this time by that noted French navigator, Commodore Beaulieu. This officer had commanded one of the two ships of the first French expedition sent out by the East India Company in 1616, when Captain De Nets, owing to the opposition of the Dutch, was compelled to sell the smaller ship to the Sultan of Java. On October 2nd, 1619, Commodore Beaulieu sailed from Honfleur, with three ships, the *Montmorency*, of 450 tons, carrying 162 men and twenty-two guns; the *Hope*, Captain Grave, of 400 tons, 117 men, and twenty-six guns; and the *Hermitage*, of seventy-five tons, thirty men, and eight guns. Soon after rounding the Cape, the commodore sent the *Hope* to Bantam, and proceeded himself to Madagascar, the Comoro Islands, and Cape Guardafui.

When off Mount Dilly, near Cannanore, he lost eighteen men in a conflict with the crew of a native vessel he had boarded, and, on the 1st of December, anchored at the Island of Ticou, off Sumatra, having been since the 2nd of October making the passage from Comorin. Owing to sickness, he had lost during these two months, both his surgeons and twenty-five men; and he adds, 'if the calm had continued but fifteen days longer, I believe I had lost all the men in my ship.' On the 1st of January, 1624, Commodore Beaulieu sailed for Acheen in Sumatra. Here he lost fourteen men from sickness, and suffered greatly from the exactions of the king, whom he describes as a sanguinary and avaricious tyrant. On the 14th of July, he proceeded to Ticou, but returned to Acheen on the 12th of October.

At this time he learned the fate of the *Hope*, Captain Grave, who, when about twenty leagues from Ticou, had sent on his long-boat; but the entire crew were lost, and he and all his men suffered from sickness. In this condition they met the Dutch ship *Leyden*, of 1200 tons, commanded by William Schouten, who seized the *Hope* as a prize, and treated the crew with great barbarity; indeed, all through his narrative, the commodore dwells on the rapacity and cruelty of the Dutch, contrasting them unfavourably with the English. The *Hope* was afterwards restored to Captain Grave, who proceeded to Bantam and thence to Socotra, where his ship was burnt by the Dutch, as he states. Commodore Beaulieu sent a boat for Captain Grave, and, on the 15th of November, arrived at Acheen, when he procured the release of the imprisoned French seamen, and, after another visit to Ticou, where he completed his cargo of pepper, he sailed on the 1st of February, 1622, with a crew of seventy-five men, the survivors of the expedition.

On the 1st of December, 1622, Commodore Beaulieu arrived at Havre de Grace, and his voyage was commercially not an unprofitable one, notwithstanding the loss of the *Hope*, which had a cargo valued at £75,000. Commodore Beaulieu writing of the naval resources of the King of Acheen in Sumatra, at the time of his visit in 1620, says that this prince 'is stronger by sea than any of his neighbours, for he has about one hundred great gallies, of whom a third part is much larger than any we build in Christendom. I saw the keel of an ordinary one that was 120 feet long, all in one piece. They put two men to an oar, who stand upright when they row. Their sails are square like those of a ship. The sides or planks of these gallies are six inches thick. They have commonly three good pieces of cannon, and the largest gallies have commonly 600 or 800 men.'

The commodore, after his return, did further good service to his country, and died in September, 1637, at the age of forty-eight. His papers and journals remained unpublished for twenty years after his return from his memorable voyage, when they appeared in M. De Thevent's collection of voyages.

Under the auspices of Cardinal Richelieu, another company was chartered on the 24th of June, 1642, and, on the 20th of September, in the following year, its privileges were confirmed by the Regency acting on behalf of Louis XIV. For twenty years this Company sent annually a ship to the East Indies, chiefly to Madagascar; but the result was not encouraging, owing, as it would seem, to an inherent inability in the national character to succeed either in colonising or commerce, and the futile efforts of their neighbours were regarded with contempt by the flourishing societies established in England and Holland. But Colbert, that greatest of

French finance ministers, elaborated a scheme which was distributed throughout France, and resulted in the formation of a powerful East India Company, on the 7th of August, 1664. An edict was promulgated embodying his proposals, and, in the following spring, four large ships sailed from Brest for Madagascar, the name of which was changed to Dauphin's Island.* Five years later a move was made in the right direction by the establishment of a factory at Surat, where the English and Dutch had long been seated, and their manager in India, a capable man named Carrini, also established an agency on the Malabar coast, and received a grant for the occupation of Port Louis, in Mauritius, the island of Madagascar being ceded to the Crown. The king, at the instigation of Colbert, also afforded the Company practical proofs of his appreciation of their efforts to extend the greatness of his kingdom, by excusing them the payment of a debt of four million crowns due to the government, and exempting their cargoes from all import duties.

But, notwithstanding this powerful aid, the affairs of the Company languished, owing to the war with Holland, in 1672-78, in which they suffered heavily, and to the dishonesty of their servants, and in 1684, one year after the death of their powerful protector, it was found that half the capital, or about £300,000, had been absolutely lost, the return being nil. The French China Company was established in 1660, but was absorbed by the East India Company on its reconstitution four years later. Up to the year 1703, one ship annually made a voyage to Canton with great pecuniary success, but, on

* This settlement was the southernmost port of the island (in lat. 25° 1′ S., long. 47° 3′ E.), and is still called Fort Dauphin. Between this point, where the fort constructed by the French still exists, and Tamatave Road is no safe anchorage.

the outbreak of the great European war, these ceased, and its rights to trade with China, Tonquin, and Cochin China lay dormant until its amalgamation in 1719.

The African Company originally traded from Dieppe to Senegal, but the trade came into the hands of the merchants of Rouen, and, in 1664, to the West India Company. On the dissolution of this company, ten years later, the old private company of Senegal was revived; but, in 1681, Colbert induced the three proprietors to dispose of the greater part of their privileges to an association known as the Guinea Company, the rest remaining in their hands. After many vicissitudes, the original society was united in 1719 to the Company of the Indies and the Guinea Company, which, in the year 1701, acquired, from Philip V. of Spain the liberty of transporting negroes to the Spanish West Indies, and, finally, by the Treaty of Utrecht, conveyed its privileges to the English, and gave rise to the South Sea Company, established by Lord Oxford on the advice of Sir John Blount. Regarding the French West India Company, it owed its foundation to a native of Rouen, one Robert Cavalier de la Salle, who discovered the river Mississippi in 1680, and, four years later, proceeded with four ships and a large number of colonists to take possession of the adjacent country. He missed the mouths of the river, and settled at another point, where he was killed on the 20th March, 1687, the colony being reduced by disease to only 100 souls. Seven years later, one Mr. Heberville, of Canada, explored the mouths of the Mississippi, and designed to settle there, but died, and the affair slept until the year 1712, when Mr. A. Crozat, having received letters patent, established a colony there, and called the river the St. Louis, and the country Louisiana. Returning to the French East India Company.

In 1686 an alliance was formed by the French Government with the King of Siam, but this ended also in disaster, for the king and his minister, one Constance, an Englishman, were murdered, and the French garrison in Bangkok cut off. Their settlement in Pondicherry, acquired for them, in 1674, by Mr. Martin, was a great success, and though it was captured by the Dutch in 1693, after an obstinate defence, it was surrendered on the conclusion of peace, seven years later, to its former masters, and became their chief factory and a fortress of great strength. In 1712, the French East India Company was again in difficulties, and in May, 1719, they and the China and African Companies were all amalgamated, by royal edict, into one corporation, called the Companies of the Indies. In July of the following year, by the terms of a second decree, the privileges of the combined association were made perpetual, and they were styled the 'Perpetual Company of the Indies.' Still under this grandiloquent title the company were barely able to maintain a struggle for existence; in the years 1721-22, they were not able to send a single ship to India, and during the next fourteen years, three or four only were despatched. But in 1737, the French Minister of Finance, M. Orry de Fulvy, infused fresh vigour by the supply of considerable sums of money; in two years their returns were doubled, in three, trebled, and, in 1742, the sale at Port l'Orient produced twenty-four millions of French livres, equal to one million sterling, while seven ships brought rich cargoes home. However, this prosperity was delusive, for when, owing to the drain of the war with England, M. de Fulvy withdrew the annual subsidies, the dividends sunk to a much lower level.

The French now became an actively aggressive power,

and entered upon that career of rivalry with us which only terminated with the capture of Mauritius in 1810. Their commercial enterprises were subordinated to the exigencies of ambitious schemes of conquest, and they struggled desperately with us for empire; indeed, at one time were within an ace of success, but their agents were deserted at home, and the treaty of 1783 snatched for ever the prize which appeared almost within their grasp. The annals of the French in India are illumined by the deeds of great warriors, like Dupleix, Bussy, Lally, La Bourdonnais and Suffren, but they were well matched by such doughty champions as Clive, Lawrence, Coote, and Hughes; the star of England was in the ascendant, and before it the feebler light of France 'paled its ineffectual fires.'

The French possessions in India now consist of Pondicherry, Caricall, and Yavaon, in the Madras Presidency, the latter inland near the bifurcation of the Godavery and river of Coringa; Chandernagore, seventeen miles north of Calcutta, occupied in 1700, when Calcutta was first settled by the English, captured in 1757 by Clive and Watson, restored with her other factories six years later, again lost in 1793, and finally restored at the peace in 1814; and Mahé, on the west coast, seven miles from Tellicherry, captured by us in 1779, but restored in 1814.

The Danish East India Company was founded about the year 1612, under the protection of King Christian IV., the capital of the Copenhagen merchants constituting it, consisting of 250 shares of 1000 rix-dollars each. Afterwards they fitted out four ships trading to the East Indies, and were so successful that they founded a settlement at Tranquebar on the Coromandel coast, 147 miles south of Madras, where they built a

fort and town. The trade was inconsiderable, but it excited the jealousy of the Dutch, who prevailed on the Rajah of Tanjore to attack the Danes, though, owing to the timely and gallant assistance afforded by the English Government at Fort St. George, the attempt was defeated. In April, 1728, the King of Denmark, encouraged by the opening made by the extinction of the Ostend Company, gave a fresh charter to the Company, by which its commerce was enlarged and extended. The Danish possessions in India—Tranquebar and Serampore, near Calcutta, of which city it became the Alsatia, being the resort of all persons flying from justice—were purchased from the Danish Government by the East India Company in 1845. The Danes are also said to have established a settlement in the Persian Gulf, at Charrack, a town opposite the island of Kais (Kenn), near to which is Charrack Hill, said to be the Mount Ochus of the ancients.

The design of forming a Swedish East India Company, was one of the cherished dreams of that greatest of Scandinavian monarchs, Gustavus Adolphus, and he actually invited his subjects to enter into a trade with those countries, under his sign-manual, dated at Stockholm, the 14th of June, 1626, but the outbreak of war with Germany prevented the realisation of the design. Beyond an attempt made by his daughter, Queen Christina, to found a colony in New Jersey, where her subjects established three towns, Christina, Elsinburgh, and Gottenburgh, but from which they were driven by the Dutch, who here, as in India, ever displayed a narrow and jealous policy towards their European neighbours, the Swedes made no attempt to extend their commerce; but on the ruin of the Ostend Company, the Swedish Government, at the instigation of a

rich merchant, Henry Kenning by name, conceded to him and his associates, who agreed to pay a subsidy for the privilege, the liberty of trading from the town of Gottenburgh to the East Indies, between the Cape of Good Hope and Japan, the charter to be for fifteen years from the 14th of June, 1731. Two years later, two ships, the *Frederick* and *Ulrica*, fitted for trade or war, quitted the port of Gottenburgh for China, and a factory was established on the Canton River. The company, unlike the Portuguese, Dutch, and Danes, never settled in India, and their trade to the East was but insignificant.

CHAPTER XI.

Christopher Columbus and his Times—His first Voyage to America in 1492, and Discovery of San Salvador—The first Spanish Colony founded at Hispaniola—Columbus's second Voyage, and Discovery of Dominica, the Antilles, Porto Rico, Cuba, and Jamaica—Third Voyage of Columbus to the West Indies, and Discovery of Trinidad and the Coast of South America—The Voyage of Americus Vespucci—Exploration of the Coast of South America by Pinzon, and Discovery of Brazil by Cabral—Columbus's fourth Voyage and Exploration of the Coast adjacent to the Isthmus of Panama—Death and Character of Columbus.

WHEN Columbus expressed his intention to plunge into the watery solitudes of the Atlantic Ocean, the 'Sea of Darkness' of the Middle Ages, the undertaking was regarded with awe by the multitude, and the bold mariner who sought to tear aside the veil that hid from mortal gaze the features of nature in her most awful and mysterious mood, was looked upon as foredoomed to the terrible fate that awaited such crass impiety.

According to the ancients, in Hesperia, or the West, were the 'Elysian Fields' of Homer, and the 'Happy Isles' of Hesiod, and the North American Indian, again, unconsciously following classic mythology, placed Paradise, the 'Happy Hunting Grounds' of the dead, in the Far West, the regions of the setting sun. This picturesque legend gains in impressiveness by the fact that it was held by such dissimilar members of the human family as the savage red man of the Indian prairie and

forest, and the cultured disciple of Aristotle and Socrates. Not less mysterious to the Greeks was the abode of the Hyperboreans, those dwellers in an earthly paradise, mentioned by Homer and Pindar, and placed by Herodotus, on the authority of Aristæus, the poet and traveller, beyond the Scythians, and on the confines of the Northern Ocean, where

> 'All is ruled by silence far and wide,
> Save light waves lapping on the iceberg's side.'

Hecatæus speaks of the Hyperboreans as a people who 'inhabit a great island in the sea, opposite to Gaul and under the North Pole;' and Onesicratus, who visited India, said that the natives had the same legends of them as those told by Pindar. This we know to be true, as the Mohammedan author of the 'Ayeen Akbary' says that, 'Some affirm that beyond the ocean there is a blessed land of gold, inhabited by mortals, who invariably live 1000 years, and never suffer by sickness or by sorrow.'

As the discoveries in the Eastern hemisphere, from Cape Blanco to Malacca, were made by the Portuguese, so those in the Western hemisphere, from the West Indies to Polynesia, were chiefly due to the enterprise of the Spanish navigators. A few years before Vasco de Gama reached India, Columbus, or Christoval Colon, to call him by his real name, made his famous voyage across the Atlantic, and gave to Europe a new world. Columbus, in making this great discovery, so fraught with the most momentous consequences to the human race, had to combat the wildest theories and traditions. It was said that at a time indefinitely remote, there existed a vast insular territory extending beyond the coasts of Europe and Africa, and that this land was

called Atlantis. In the fourteenth century, maps were drawn representing this strange country, which, according to legends, having been shaken for three days to its foundation by an incessant earthquake, at length yielded to the irresistible and mysterious power of the Deity, and sank with its inhabitants into the depths of the ocean. It was believed that the inhabitants of Madeira and the other western isles, saw, at certain times, and in very clear weather, land appearing in their western horizon; this land was called St. Brandon's Island, after an Irish saint, held in repute among the Northerners, who sailed these parts in the sixth century, and first raised a belief in the existence of Western lands. In a map published by Martin Behim,* a native of

* Martin Behim, or Behaim, for whom, as Robertson complains, some German authors claim the honour of the discovery of America, accompanied Diego Cam in his voyage of discovery along the coast of Africa in 1483, and having obtained a grant of the island of Fayal from the Regent of Portugal, established a colony of Flemings there. In 1492 he returned to Nuremberg, and there constructed a map of the globe, which is still preserved in the library of that city, and of which Robertson, who procured a copy, observes (see 'History of America,' vol. i. p. 368): 'The imperfection of cosmographical knowledge is manifest. Hardly one place is laid down in its true situation. Nor can I discover from it any reason to suppose that Behim had the least knowledge of any region in America.' This map was constructed, says Barron, from the writings of Ptolemy, Strabo, and Pliny, and from the modern travels of the Jew, Benjamin of Tudela, of Carpini, Rubruquis, and especially of Marco Polo. The Germans surpassed even the Spaniards in their attempts to rob the great Columbus of the credit of being the discoverer of the New World, and, by means of forged documents, sought to claim for Behim the discovery of Brazil and Patagonia. From the fabricated letters of Behim, said to have been written in 1486, and preserved in the archives of Nuremberg, it would appear that 'Martin Behaim, traversing the Atlantic Ocean for several years, examined the American Islands, and discovered the Strait which bears the name of Magellan, before either Cristopher Columbus or Magellan sailed those seas; whence he mathematically delineated, in a geographical chart for the King of Lusitania, the situation of the

Nuremberg, about the time when Columbus set out on his expedition, we find the Island of Antilla (the Seven Cities), lying out to the westward of the Azores. These imaginary cities were said to have been built and occupied by the Christians who fled from Spain when that country was conquered by the Moors; and the Spaniards endeavoured to find them soon after their discovery of America. Northward of these cities the maps of the times placed the Island of the Devil's Hand, in accordance with an Arabian tale, which relates that, in the Indian sea, there is an island, near which a great hand rises every night from the water, and, grasping the inhabitants, plunges them into the ocean. Farther on to the westward, but near the equator, was placed St. Brandon's Island, and still farther on, many of the countries visited by Marco Polo, which were said to abound in everything rich and beautiful, while the adjacent seas were peopled with sirens. Beyond these countries, but on the other side of the equator, were placed ten small islands, where ships could not sail, owing to the loadstone, which abounds in the rocks, attracting the nails and ironwork out of the ships, and so causing them to fall to pieces.

Doubtless these fables had a certain effect upon the

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coast around every part of that Strait long before Magellan thought of his expedition.' As Barron observes, the story of Behim's prior discoveries had its origin in the following remarkable passage in Pigafetta's narrative of Magellan's famous voyage: 'The Captain-General knew that he must make his passage through a Strait mouth concealed, as he had seen on a chart in the depôt of the King of Portugal, made by that most excellent man, Martin de Bremia.' Herrera also asserts that Magellan was in possession of a terrestrial globe made by Behim to assist him in directing his course to the South Seas, and that Columbus was confirmed in his opinion of a western navigation by his friend Martin de Bohemia. (See Burney's 'History of Voyages and Discoveries,' vol. i. p. 3.)

mind of Columbus, in stirring him up to solve the problems and difficulties which had long been started on this point, but they could not have been sufficient to decide the calm and logical judgment for which he was conspicuous, which caused him to reason that land existed to the westward, and that, by sailing in that direction, the East Indies must necessarily be reached. A due consideration of the spherical figure of the earth, by which he was aware that India could be approached from Europe if land intervened, with the fullest knowledge of astronomy, geography, and navigation which the times afforded, were the main aids which incited this distinguished navigator to institute, and to carry to a successful termination, the task of examining the more distant portions of the globe.

Irrespective of his claims to immortal renown as the discoverer of the New World, and the enthralling interest attaching to the narrative of his voyages, it is certain that the biography of Columbus is of value as showing what high character, indomitable perseverance, and illustrious talents will achieve. From his youth he was filled with the consciousness of having a destiny to fulfil, and obstacles and difficulties, so far from daunting him, only urged this hero, in the true sense of the word, to persevere until he achieved the discovery of the Western hemisphere. If the first man who launched the frail bark on the stormy billow is entitled to immortal renown, how far greater was the courage of this indomitable seaman who dared to cross the unknown and mysterious Atlantic.

'Illi robur et æs triplex
Circa pectus erat, qui fragilem truci
Commisit pelago ratem
Primus.'

Probably few men have found so many biographers as Columbus, the first being his son Ferdinand, who begins his work—for which see 'Pinkerton's Collection,' vol. xii., and 'Churchill's Collection,' vol. ii.—by fancifully tracing the ancestry of his father to Junius Colon, of whom Tacitus, in his twelfth book, says that he brought Mithridates prisoner to Rome. Numerous cities claim the honour of having given him birth, though, from a document produced in a process concerning his dukedom of Veragua (see the 'Viagero Universal'), Ferrara would appear to be the genuine claimant.

The opinions Columbus had formed as to the existence of another hemisphere, must have been strengthened by various reports, such as that the inhabitants of some of the islands west of Africa had occasionally picked up pieces of artificially-carved wood, which could not have been cut with a knife, and must have been brought thither by strong westerly winds; that seamen navigating those seas had taken up canes of an extraordinary size, described by Ptolemy as being peculiar to India, trunks of large pine trees, which had been torn up by the roots, and plants such as had not been seen in the Old World; and that some bodies of men were said to have been cast by the waves upon the shore of Flores, one of the Azores, of which the features and complexions differed essentially from those of the inhabitants of Africa or of Europe, or from anything hitherto seen, thus pointing to the conclusion that they had been wafted over from the west.

After much toil and vexation of body and mind, endured first at the Court of Portugal, which deluded him, and afterwards at the Court of Spain, Columbus at length, in the year 1492, prepared for sea three vessels, having on board less than 100 men. The task the

great navigator set himself was, to reach the Kingdoms of Cathay, or China, and Zipangu, or Japan, which formed, according to the cosmography of the day, part of the great continent of India, on the Asiatic coast, and were distant about one-third of the circumference of the earth, as was supposed. He thus set out under the influence of two favourable, though mistaken, ideas—first, that Asia extended considerably more to the east than it really does; and secondly, that the earth was much smaller than we now know it to be.

Columbus sailed from Palos on his ever-memorable voyage, on Friday, the 3rd of August, 1492, with three vessels, the *St. Mary*, *Pinta*, and *Nina*, having on board crews of the aggregate strength of ninety men, the commanders of the two latter vessels being those 'skilful mariners,' Martin Alonzo and Vincent Yanez Pinzon, who were accompanied by their brother, Francis Martinez Pinzon. During the voyage hope failed in the hearts of all the officers and seamen, and they were only restrained from breaking out into open mutiny by the determined bearing of Columbus, who appeared as though inspired; at length, when they had sailed 950 leagues from the Canaries, for a period of thirty-three days, land was first sighted by a sailor, whose name, Roderick de Trians, deserves to be immortalised. In the morning Columbus, accompanied by the Pinzons, landed with a flag bearing a green cross with three crowns and the names of their Catholic Majesties. 'Having all kissed the ground, and, on their knees, given thanks to God for the goodness He had shown them, the admiral stood up and gave that island the name of San Salvador, which the men called Guanaham, being one of those afterwards called Lucayo Islands.' After discovering other islands in the Bahamas, and Hispaniola,

where he lost his ship, and having planted a colony at a point he called Navidad (the Nativity), Columbus sailed on the 4th of January, 1493, and, putting in at Lisbon, where he had an audience of the King of Portugal, arrived safely at Palos on the 15th of March.*

Columbus's journey from Seville to the Royal Court at Barcelona was a triumphal procession, and Ferdinand and Isabella received him with great distinction. The king secured a Bull from Pope Alexander VI., dated the 2nd of May, 1493, granting him the recent discoveries, and the Pope, in order to prevent disputes with the Portuguese, who were then in the full career of their discoveries in the Eastern hemisphere, exercised his claim to dispose of the kingdoms of the earth, by issuing, on the same day, a second Bull, fixing as limits of partition between these two powers, a meridian to be drawn from pole to pole, one hundred leagues west of the Azores and Cape de Verde Islands, all newly discovered lands, as far as 180° to the west, to belong to the crown of Spain, and the same distance eastward, to the Portuguese. In 1494, however, at the instance of the latter, the line of partition was removed 270 leagues more to the west.

Ferdinand hastened the departure of Columbus on a second voyage of exploration, and, accordingly, on the 25th of September, 1493, he sailed with seventeen ships from Cadiz, and, leaving Gomera, in the Canaries, on the 7th of October, discovered, on the 3rd of November, the island he named Dominica, because it was seen on

* A curious reference is made in this voyage to mermaids, whose existence was believed in by mariners of that day. 'The Admiral affirmed that he had seen three mermaids that raised themselves above the water, and that they were not so handsome as they are painted, that they had something like a human face, and that he had seen others on the coast of Guanim.' These were doubtless seals.

Sunday morning. The same day he sighted the island he named, after his ship, Marigalante, where he landed, and, on the 4th, the island of Santa Maria Guadaloupe was named, after a monastery in Spain; the inhabitants described themselves as Caribees, or Cannibals, by which name, and that of Antilles, all the group to the east of Porto Rico was known. Proceeding towards Hispaniola, Columbus named Montserrat (so-called after a mountain near Barcelona), Redonda, on account of its being round; others he called Santa Maria da Antigua; St. Martin; a group, 'the Eleven Thousand Virgins' (the largest being named St. Ursula); and to the island now known as Porto Rico, called by the Indians Boriquen, he gave the name of St. John the Baptist. On the 28th, Columbus anchored at Navidad, in Hispaniola, but found the settlement burnt and deserted, and, on making inquiries, learnt that the Christians had all been either killed by the Indians, or drowned while attempting to escape.

On the 7th of December Columbus proceeded to the eastward, and planted a colony, which he called Isabella, and, on the 2nd of February, sent twelve of his ships back to Castile, under the command of Anthony de Torres, with a full account of his proceedings to date, retaining two ships and three caravels. On the 12th of March, he proceeded inland to the mines of Cibao, which had been 'prospected,' as Australians say, by Alonzo de Hodeida, and here, eighteen leagues from Isabella, he built a fort he called St. Thomas. Columbus, having resolved to continue his discoveries, appointed a council to govern the island of Hispaniola, in his absence, of which the president was his brother James, and sailed on the 24th of April for Cuba. Five days later he crossed the passage between Cape St. Nicholas and that island, and anchored in a bay situated a league beyond

Cabo Puerto, which he called Puerto Granda (Grand Port). On the 1st of May, he continued his voyage along the coast, discovering and naming the harbours, rivers, and headlands, and then crossed over to Jamaica, and gave the harbour in which he cast anchor the name of Puerto Bueno, because he 'thought it was the best of any he had yet seen in the Indies.' After a skirmish with the natives he sailed on the 9th, and leaving Jamaica on the 15th, crossed over to that point of Cuba which he called Cabo de Santo Cruz, (Cape of the Holy Cross). The admiral sailed along the coast, past numberless islands, 160 being counted in one day, and 71 on the second, the navigation among which increased his labour and anxiety, as we are told that 'he was much spent, because he had not slept or lain in bed ever since he went from Spain till the 19th of May, except eight nights, as appears by his journal, when he was very much indisposed.'

On the 13th of June, perceiving that the coast of Cuba still trended to the west, although he had been assured by an Indian a few days before that it was an island, and his supply of provisions failing him, he returned towards Hispaniola. On the 18th of July he arrived at Cape Cruz, in Cuba, near which he nearly lost his ship in a violent storm on the 9th of August, and, standing over to Jamaica, named the most easterly cape on the south coast, Cabo del Farol. Proceeding on his voyage along the coast of Hispaniola, on the 24th of September he named Cape St. Raphael, and touched at the island of Mona, between Hispaniola and Porto Rico, and, on the 29th, arrived at Isabella. Here the admiral, to his great joy, met his brother Bartholomew, whom he had sent seven years before to King Henry VII. of England, to propose that he should undertake the discoveries, and

who had arrived from Spain, in the previous April, with three ships bringing provisions. Columbus appointed Bartholomew, who is described as 'a very wise man, and as expert in sea affairs as his brother,' Adelantado, or Lord-Lieutenant, which Ferdinand resented, but ultimately confirmed him in the title.

At this time Pedro Margarite, one of Columbus's officers, refused to obey his orders, and sailed with some vessels for Spain, where he spread lying reports of the doings of his commander, who, on his part, having conquered the inland part of Hispaniola, and placed his brother Bartholomew in command, with another brother, James, to succeed, in the event of his death, sailed on the 10th of March, 1496, with two caravels, John Aguado being in command of the second, having on board 220 men. Calling at Marigalante and Guadaloupe, which he left on the 20th of April, on the 8th of June the land between Cape St. Vincent and Lisbon was sighted, and the admiral, landing, journeyed to Burgos, where he was personally received by Ferdinand and Isabella. One ship, under Peter Fernandez, was sent with supplies for the colonists in Hispaniola, but, owing to difficulties thrown in his way by the numerous enemies his success had raised—chief among whom were Juan Fonseca, Archdeacon of Seville, and afterwards Bishop of Burgos, who ought to be branded for his mean jealousy—it was not until May, 1498, that he could procure a fleet sufficient to carry the necessary supplies to his brother Bartholomew, who, during his absence, had founded the settlement of San Domingo.

Columbus sailed from San Lucar, on his third voyage, on the 18th of May, with six ships, and, having sent, from Gomera, three ships, with supplies, in advance, proceeded to the Cape de Verde Islands, and, steering a

new course, on the 31st of July sighted a headland he called De la Galera (Gally Point) in an island to which he gave the name of Trinidada. Here he named Punta de la Playa (Point of Strand), where he took in water, and Punta del Arenal (Sandy Point), and entered the bay he called De la Ballena (or the Whale), without knowing that he was close to the continent of South America. From Point del Arenal, where his men went ashore to refresh themselves, he saw towards the N.W. what he believed to be an island, which he called Isla Santa, 'which,' says Harris, 'proved to be the province he afterwards called Paria.' 'Being come up to the continent,' adds the historian, 'which he at this time thought to be an island, he named a headland Cape Boto (burnt) and another in Trinidada he called De Lapa, the distance between them being five leagues, with two little islands in the middle, one of which he named El Caracal (the Snail), and the other El Dolfin (the Dolphin).' Owing to the narrowness of the strait dividing Trinidada from the continent, and the broken water of the river Yayapari, where it flows into the sea at the Bay of Bacena, he called the passage Boca del Drago, or the 'Dragon's Mouth.'

Columbus now explored the coast line for some distance, naming Capes Bellaforma (because it looked well), Del Aguina (Needle), and Sabeta; also a large town he called 'The Gardens,' and other points, Ysabeta and Tramontana, and a large bay, De los Perles, or the 'Bay of Pearls.' On the 11th of August he retraced his steps, intending to proceed to Hispaniola, to send for men and provisions into Spain, and order his brother to continue this discovery; and, passing between Capes Boto and Lapa, sailed along the continent, naming the Capes De Conchas (Cape of Shells),

Luenga (Long Cape), and Capes Sabor and Rico ; also some islands, including Margarita and Cubaque. On the 16th of August, he steered towards Hispaniola, and arrived, on the 22nd, at Santo Domingo, where he was received by his brother Bartholomew, who informed him of the rebellion of one of his officers named Roldan. Some days later arrived the three ships he had sent on in advance from the Madeiras, under Alonzo Sanchez De Carvajal, Pedro de Arana, and John Anthony Columbus, which had put into the port of Xaragua, where Roldan had established himself with his followers. Ultimately one hundred and two of these men addressed a petition to Columbus in October, 1499, praying for forgiveness and asking that lands might be assigned to them, and he placed them in the province of Xaragua and other places, 'which,' says the historian, 'was the first distribution made in the Indies.'

At this time the intrigues and lying reports regarding Columbus, spread by those of his rebellious followers who had returned to Spain, resulted in Ferdinand and Isabella adopting a course of conduct towards that illustrious man which forms an eternal blot on their memory. Instigated by these mutineers and his enemies at Court, chief among whom was Fonseca, the Bishop of Burgos, their Catholic Majesties, on the 21st of May, 1499, appointed one Travies de Bobadilla, described as 'a poor Knight of the Order of Calatrava,' to proceed as judge to Hispaniola, 'to inquire into all these affairs, ordering him, in case he found the admiral guilty of what was alleged, to send him to Spain and stay there himself as Governor.' Bobadilla arrived at Santo Domingo, at the end of August, 1500, when Columbus and his brother was at Conception, 'settling the affairs of that province, where his brother had been attacked

by the rebels.' Establishing himself at the palace, on the 7th of September he sent John de la Sera with the Royal despatch to Columbus, who immediately returned, and Bobadilla, 'in the beginning of October, without any legal information, sent him prisoner aboard a ship, together with his brother James, putting them in irons and a guard over them, and ordered under severe penalties that none should dare speak to them.' On the voyage to Spain, Andrew Martin, the captain, would have removed the irons, but Columbus would not permit it, saying, 'That since their Catholic Majesties by their letter directed him to perform whatsoever Bobadilla in their names commanded him to do, he would have none but their Highnesses themselves to do their pleasure herein; and he was resolved to keep these fetters as relics and memorial of the reward of his many services, which accordingly he did, for these irons hung up in his room, and he ordered them to be buried with him.'

On the 20th of November, Columbus wrote from Cadiz acquainting their Majesties of his arrival, when they immediately directed his release, and sent him very gracious letters expressing their sorrow at the sufferings and indignities to which he had been subjected. On his arrival at Granada, where the Court was, Ferdinand and Isabella personally expressed their regret, and despatched Nicholas de Olanda as Governor to Hispaniola, with instructions to exonerate Columbus, and compel Bobadilla to make restitution to the admiral of all his property which he had seized.

On the 20th of May, 1499, Alonzo de Ojeda,* one of

* Harris says: 'Though he and Vespucci never saw any other part of the continent than what Columbus had discovered sailing from the island of Trinity along the coast to Venezuela, yet he (Vespucci), im-

Columbus's companions on his second voyage, under the patronage of the Bishop of Burgos, sailed from Seville with four ships to explore the coast of South America, accompanied by Americus Vespucci (also called Amerigo Vespuchi), a Florentine, whose letters appear in 'Ramusio's Collection,' vol. i. The continent of America very improperly received its name from Vespucci,* who is described by Herrera as 'a vain man, but an enterprising good navigator,' whereas not only is Columbus entitled to the honour, he having discovered the West India Islands, of which the discovery of the continent was a necessary consequence, but in August, 1498, he sighted the mainland which Cabot had already seen in the previous year.

Not long after Ojeda sailed, some inhabitants of Seville formed a company, and Peter Alonso Nino, an inhabitant of Palos, who was with Columbus when Paria was discovered, obtained a license from the king, 'upon condition that he should not come to anchor, nor land anywhere within fifty leagues of what the admiral had discovered.' One, Guerra, having agreed to defray the necessary expense provided his brother Christopher went as captain, they arrived at the province of Paria a few days after Ojeda. They carried on a brisk trade in

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pudently pretended to have first discovered the continent.' In Spain the falsehood and injustice of his pretensions were soon discovered, for whereas he pretended that after a voyage of thirteen months spent in discoveries he returned directly to Spain, Ojeda positively made oath that he spent but five months on the voyage.

* This arose from the circumstance that in 1507, after Columbus's death, Vespucci was employed by the King of Spain, with the title of pilot-major, in making charts of the new discoveries, when he gave his own name to the land of South America, which has since been extended to the whole continent. Vespucci is described as 'the most accomplished draughtsman and cartographer of his time.'

pearls with the Indians on the coast, and arrived in Galicia on the 6th February, 1500.

In 1499, Vincent Yanez Pinzon, an able and daring seaman, who had sailed with Columbus in his first voyage, fitted out four ships at his own cost, and proceeded on a voyage of discovery. Quitting St. Jago, in the Cape de Verde Islands, on the 13th January, 1500, he crossed the equinoctial line, his being the first Spanish ship to do so, and, on the 26th February, being drawn to the westward by a storm, sighted land which Pinzon named Cabo de Consolation (Cape Comfort) which was afterwards called Cape St. Agustine. He landed and took possession of the country in the name of Ferdinand and Isabella, and, after a vain attempt to induce the people to trade, in which life was lost on both sides, continued his voyage to the mouths of the Maranon, since named Amazon, from the statements of travellers that they saw armed women on its banks. Pinzon now proceeded to Paria, and thence to the Carribee Islands, and while at anchor here a dreadful storm arose, in which two of his ships sunk with all hands on board. He refitted the two others at Hispaniola, and returned to Spain in September, having explored 600 leagues of coast line. Soon after Pinzon's discovery of the Maranon, a Spanish navigator who had sailed from Spain in December, 1499, arrived at the mouths of that river, when the inhabitants, enraged at Pinzon having captured thirty-six of their countrymen, attacked him and killed several of his crew. The discovery of the vast country, known as Brazil,* from the

* Adventurers visited and settled in Brazil, but, in 1549, John III. of Portugal sent Thomas de Souza as Governor-General of Brazil, with six ships, a large number of men, and six Hermit fathers to convert the people. In 1555, Nicholas Durant, with a party of Huguenots, in three vessels, sought refuge here from the tyranny of Henry II. of

wood abounding there, is due to Pedro Alvarez de Cabral, a Portuguese officer, who sailed from Lisbon on the 9th March, 1500, with a fleet of thirteen ships, having on board 1200 men for the East Indies. Having kept far to the westward to avoid the calms that prevail on the Guinea coast, on the 24th April he fell in with the coast of America. He brought to an anchor in a harbour which he called Puerto Seguro (safe harbour), and communicated with the people whom he found very friendly. Cabral called the country Santa-Cruz, or Holy Cross, and, having sent a ship to Portugal, under Gaspar de Lemoa, with news of the discovery, and left behind two men, sailed for the East Indies.

Columbus continued to press their Catholic Majesties for permission to return to the Indies, but his proposals were received with coldness, until he expressed an opinion that he should be able to discover a passage to the East Indies, and add that portion of the world as well as the West Indies to the Crown of Castile and Leon. This had the desired effect; a fleet of four ships, one commanded by his brother Bartholomew, was immediately fitted out, and he set sail from Cadiz on the 9th May, 1502. Arriving at Martinique on the 15th June, he touched at Dominica, Santa Cruz and Porto Rico, and proposed to proceed to San Domingo, to change one of his ships, which was a bad sailor, for another, as he designed to explore the coast of Paria to the westward until he came to the strait which he concluded existed about the isthmus of Panama.

France, and, in November, settled at a place to which they gave the name of Fort Coligny, where they were joined by some Protestants from Geneva. In 1625, the Dutch made themselves masters of the capital, called St. Salvador, and the struggle between the Portuguese continued until, by the terms of the treaty of 6th August, 1660, they finally resigned all claims to Brazil to the House of Braganza.

In order to give notice to Orlando, the governor, he sent in advance Peter de Terreres, one of his captains, at the same time advising him not to permit the departure of the homeward-bound fleet for a period of eight days, as a storm was imminent. But the governor would not listen to the advice of Columbus, and scarcely had the fleet of eighteen ships sailed than they were overtaken by a terrific hurricane, in which only four were saved, the rest foundering with their crews, among those who were drowned being Bobadilla, Roldan, and most of the rebels to Columbus's authority. As for the admiral, being refused admittance to San Domingo, he took shelter as close to the land as he could. During the storm three of his ships broke away, but they all rendezvoused in safety at the Port of Agua, on the south side of Hispaniola.

Columbus sailed on the 14th of July, and came to the island he called Guanaia near the country now known as Honduras, which he named Cape Casinas. Sailing to the eastward, he called the coast De la Orejas ('of the ears') because the ears of the inhabitants were bored with large holes. On the 14th of August, his brother went ashore at a cape he named Gracias a Dios, and took possession of the country for the crown of Spain. During the months of September and October, the admiral explored the entire coast to the southward and eastward, naming the towns, rivers, and headlands, and, on the 2nd of November, he arrived at Puerto or Porto Bello, giving it that name, 'because it was large, beautiful, well peopled, and encompassed by a well-cultivated country;' without knowing it, he was at the narrowest part of the neck of land joining the continents of North and South America, and close to the vast Pacific Ocean, the highway he dreamt of, which was to

carry his ships to the traditional Spice Islands, now known to the world as the Moluccas.

The coast was further explored, and, in the beginning of January, the ships cast anchor near a river which the people called Yebra, and the admiral, Belem, or Bethlem, because it was the feast of the Three Kings. He undertook some explorations of this river and the adjacent country, where were said to be the mines of Keraqua, and, in the latter part of February, a colony of eighty men, under Bartholomew Columbus, was established on the banks of the river Bolemal. But the Indians attacked the colonists, and they suffered heavy loss, and were forced to take refuge in the ships, one of which was abandoned. At Porto Bello, whither they proceeded, the second vessel, being too leaky to float, was left behind, and, sailing thence towards Hispaniola, they discovered the small islands the admiral called the Tortugas (the Tortoises) now known as the Caymans; whence, after visiting Cuba, they sailed to Jamaica.

As the ships were now in such a condition that, though the pumps were working all day, they could not be kept above water, they were beached, and, on the 7th of July, 1503, Columbus sent some of his officers, in two canoes, to Santo Domingo, with a request to the Governor that a ship might be sent to bring them away. After enduring the direst sufferings through thirst, Trendez de Sagura reached Domingo, but, owing to delays by Orlando, it was not until the 28th of June, 1504, that a ship and caravel arrived to remove the shipwrecked mariners from Jamaica to Hispaniola. Meantime a large party under Francis de Porras had broken out into open mutiny, but Bartholomew Columbus defeated them in a severe action on the 20th of May, and they gave in their submission.

Columbus sailed for Spain on the 12th September, and arrived at San Lucar, the ship having lost her main and mizzen masts during the voyage. He recruited his shattered health for some months at Seville, and, in May, 1505, proceeded to the Court at Seguin. Queen Isabella, who had always been friendly towards him, was dead, and Ferdinand only answered with fair words the several petitions he presented, setting forth the services he had rendered and his great sufferings, and desiring the performance of the promises that had been made to him. At length, on the 20th May, 1506, Columbus, broken down with disease contracted by his arduous labours in the service of an ungrateful sovereign, whose reign he had rendered illustrious by his discoveries, and disappointed at the unworthy treatment to which he had been subjected, expired, broken hearted—as it is said, in a poor inn at Valladolid, attired in his Franciscan habit, leaving directions, with his latest breath, that the fetters with which an ungrateful monarch had rewarded his gift of a new world, should be buried with him.

Seven years after his death, his body, which had been interred in the convent church of the Franciscans, at Valladolid, was carried with great pomp to Seville, and thence, in 1536, was transferred, according to his wish, to Hispaniola, also known as Hayti and San Domingo. Here the ashes of the great discoverer lay until the year 1795, when, on the cession of the remaining half of that island to the French, in accordance with the terms of the treaty of Basilia, concluded on the 20th December, in that year, his body was supposed to have been removed to the Cathedral of Havanna. We say, supposed, because, on the 10th September, 1877, his remains were discovered near the altar, enclosed in a

coffin bearing the following inscription in German Gothic characters:

'Illtre Esdo.
Faron
Don Christobel Colon.'

During his voyages Columbus settled Hispaniola, examined Cuba, visited Jamaica and Port Rico, and discovered most of the West Indies, including Trinidad, the nearest to the South American Continent. He also left behind him projects for extending his discoveries, and among his conjectures was one to the effect that there lay a sea on the other side of the newly-discovered continent, through which there might be a passage to the Indies, the justice of which was verified by Magellan fifteen years after his death. His personal appearance is described by a Spanish historian in the following terms: 'Columbus was tall of stature, long visage, of a majestic aspect, his nose aquiline, his eyes grey, of a clear complexion and ruddy, his beard and hair, when young, fair, though through many hardships they soon turned grey.'

CHAPTER XII.

Sebastian Cabot and his Family—Discovery of Labrador and Newfoundland—The Voyage and sad Fate of Gaspar de Corte Real—Cabot explores the River La Plata—Jacques Carthier colonises Canada—The Discoveries of Spanish Navigators—The Voyage of Juan Ponce de Leon on the Coast of Florida, and of Diego Velasquez in Central America—The Career of Hernando Cortez as a Navigator—Discovery of California by Francisco de Ulloa—Nunez de Balboa sights the Pacific Ocean—Magellan rounds South America, discovers the Ladrones and the Philippines, where he is killed—The Expedition continues the Voyage, and making various Discoveries of Islands, completes the first Circumnavigation of the Globe.

In, or about, the year 1497, Sebastian Cabot, who is said to have been of English origin, but brought up at Venice, which he quitted with his father for Bristol, discovered Labrador, Newfoundland, and thus—excluding the claims of the Norse navigators from Iceland, who are said to have visited these parts, some centuries before—to the Cabot family belongs the honour of having first sighted the shores of America, as Columbus did not discover the mainland of that continent until his third voyage, in August, 1498, after leaving Trinidada. It appears that Henry VII., who then occupied the English throne, in granting Cabot a royal commission to discover and trade with these new countries, was actuated by no more worthy motive than a desire to rival the Spaniards and Portuguese, whose wealth and grandeur, derived chiefly from their discoveries and ex-

tensive commercial ventures, inflamed the cupidity of this avaricious but sagacious monarch.

It is impossible to make out the exact date of the discovery of Newfoundland,* as Hakluyt publishes no less than six accounts, which cannot be reconciled. The patent of Henry VII., granted to John Cabot, the father, and Lewis, Sebastian, and Saucias, his three sons, is dated the 5th of March, 1496, or 1495, according to Harris, and it gives them authority to sail, with five ships, upon discoveries to the East, West and North, with full property of such country or countries as they should discover, with this reservation only, that they should return to Bristol and pay the king one-fifth of the net profits of the voyage. Harris says that in the year before this patent was granted, that is, in 1494, John Cabot, with his son, Sebastian, had sailed on a voyage of discovery, and had actually seen Newfoundland, to which they gave the name Prima Vista (or First Seen), and, on the 24th of June in the same year, went ashore on an island which, because it was discovered on that day, they called St. John's. It was in consequence of the report of Cabot on this voyage, that the patent above-mentioned was granted.

On the 3rd of February, 1497, a new grant, says Harris, was made to John Cabot, but he died soon after, and Sebastian, his son, applied to the king, proposing to

* The first attempt to colonise Newfoundland ended disastrously. It was made in the year 1536, by Mr. Hore, a merchant of London, who, receiving the support of the Crown, in April sailed from Gravesend with the *Trinity* (of 140 tons) and the *Minion*, with 120 people on board, including thirty young men of good family. A colony was formed on the east side of the island, but they were reduced to such dire distress that they resorted to cannibalism, and, taking advantage of the arrival of a French ship, seized her and returned to England (Harris, vol. ii. p. 192).

discover a north-west passage to the East Indies, and, for this purpose, fitted out one ship at the king's expense, at Bristol, and three or four others at the charges of Mr. Thorne and Mr. Hugh Elliot, merchants of that city. Cabot says in his account, given to the Papal Legate in Spain, printed in Ramusio's Collection and Hakluyt's Voyages: 'When my father died, in that time when news was brought that Don Cristoval Colon, the Genoese, had discovered the coasts of India, whereof was great talk in all the Court of King Henry VII., who then reigned, insomuch that all men, with great admiration, affirmed it to be a thing more divine than human to sail by the west into the east, where spices grow, by a way that was never known before, by this fame and report there increased in my heart a great flame of desire to attempt some notable thing, and understanding by reason of the sphere, that, if I should sail by way of the north-west, I should by a shorter track come to India, I therefore advised the king to be advertised of my device, who immediately commanded two caravels to be furnished with all things appertaining to the voyage, which was, as far as I remember, in the year 1496, in the beginning of summer. I began, therefore, to sail towards the north-west, not thinking to find any other land than that of Cathay, and from thence to run towards India; but after certain days I found that the land ran towards the north, which was to me a great displeasure. Nevertheless, sailing along by the coast to see if I could find any gulf that turned, I found the land still continued to the fifty-sixth degree under our pole. And seeing that there the coast turned towards the east, despairing to find the passage, I turned back again, and sailed down by the coast of that land towards the equinoctial (ever with intent to find the said passage to India), and came

to that part of this fine land which is now called Florida, where, my victuals failing, I departed and returned to England.'

Harris, however, points out that Sebastian Cabot, speaking from memory, made a mistake as to the year in which this voyage was undertaken, for, whereas he speaks of the summer of 1496, and says expressly, it was after his father's death, John Cabot was alive in the year 1497; direct testimony is also borne to this date by Robert Fabian, who states that the voyage was made in May of this year. On the 11th of June, he sailed as high as 67° 30′ N. lat., but his crew mutinied, which compelled him to return into 56°, and thence he ran down to 38°, along the coast of the continent as far as Florida—which was visited and so named by Ponce de Leon, in 1512—whence, being in want of provisions, he returned to England, touching at Newfoundland.

In the year 1500, Gaspar de Corte Real was permitted by King Emanuel to make a voyage for the discovery of the North-West Passage to Cathay and the Indies, and, proceeding from the Azores, sailed along the east coast of Newfoundland till he arrived at its northern extremity, when, finding an opening to the west, he proceeded in that direction until he came near the entrance of the river now called the St. Lawrence, to which he gave the name of the Strait of Anian, probably from a province of China called Ania by Marco Polo, concluding that it led to the Pacific Ocean. Antonio Galvaom relates that Gaspar sailed a second time on the same route, but being wrecked, his brother Miguel proceeded in search of him with three ships, and was also lost at the entrance of the St. Lawrence. The other two ships which arrived in safety at the appointed rendezvous, on the 20th of August, returned to Lisbon, and, upon hearing of the

fate of his brothers, the eldest of the family, named Joao Vasquez, who was court chamberlain, would have gone in search of them but that the king refused his consent. The land now known as Labrador, was for some time called Corte Real, and the entrance of the river St. Lawrence bore the name of the Gulf of the Three Brothers.

Sebastian Cabot, finding that Henry VII., who was solely actuated by sordid motives, did not consider these voyages sufficiently profitable to give him further encouragement in their continuance, accepted the invitation of Ferdinand and Isabella, and proceeded on a voyage of discovery to the coast of Brazil, where he gained fresh laurels as one of the greatest navigators of the century, by his discovery of the River Plate, up which he is said to have sailed a distance of 350 miles. On his return, he was appointed Grand Pilot of Spain, and resided some years at Seville, but returned to England, where he built himself a house at Blackwall, which he called Poplar, by which that locality is still known. Henry VIII. employed Cabot, in conjunction with Sir Thomas Pett, who was Vice-Admiral of England, and, in 1516, he went on a voyage to the coast of Brazil, with two ships, one being of 250 tons, and afterwards visited the islands of Hispaniola and Porto Rico, where he traded, though Oviedo asserts that the ship was a privateer, whereas she was a frigate fitted out at the king's expense.* Captain Burney, in his 'Discoveries in the South Seas and Pacific Ocean,' speaks of a voyage to Brazil and the river La Plata, with four ships, undertaken, ten years later, by Cabot from Seville, but Harris makes no mention of this expedition, though he, and Hall and Grafton, in their chronicles, say,

* Little is known of this voyage, though it is referred to by Mr. Richard Eden, whose collection of voyages, published in 1553, led to those of Hakluyt.

that, acting on the advice of this experienced seaman, Henry VIII., on the 20th of May, 1527, despatched from London two ships, the names of the captains of which are not given, though Hakluyt mentions that a canon of St. Paul's, who was reputed a great mathematician, had a share in the voyage. 'These ships sailing very far to the north-west, the largest of them was cast away in the mouth of a very large gulf, and there perished; the other, having coasted along the island of Cape Breton, returned in October following, and brought a large account of the places they had seen, and the hardships they had undergone.'

The French were more successful in their attempts at colonisation, though they only founded colonies here as elsewhere for the English to enjoy the fruits by right of conquest. On the 20th April, 1534, Jacques Carthier, encouraged by Francis I., sailed from St. Malo with two small ships, of sixty tons and 122 men, and proceeded to the country now known as Canada, to which he gave the name of New France. Again, in the following year, he sailed with three ships, and from that date the French possessions were gradually extended until the whole country near the St. Lawrence was added to the crown of France. Carthier* laid claim to the honour of being the discoverer of this noble river, but this is certainly due to the Corte Reals.

No more attempts to colonise Newfoundland were made for some time after the failure of Mr. Hore, but the fisheries with that island grew in importance. In the reign of Henry VIII., William Hawkins, father and grandfather of two famous British naval officers, Sir John and Sir Richard Hawkins, made three

* For accounts of the first and second voyages of Carthier, see Hakluyt, vol. iii. p. 201, and p. 212; also Pinkerton, vol. xii.

prosperous voyages to Brazil and Guinea, with which a considerable trade had sprung up. Between the years 1562-68, John Hawkins made three voyages to the West Indies, where his proceedings partook of the character of buccaneering as much as that of legitimate trade. In the year 1572, Francis Drake made his expedition into the West Indies, with two ships, the *Dragon*, of seventy-five tons, and *Swan*, of twenty-five tons, having crews of the aggregate of seventy-three men; and yet, with this small force, he ventured to declare war against the King of Spain, for the injuries he had received when he accompanied Sir John Hawkins in his expedition to St. John de Ulloa in 1567-68. In this expedition he captured several large ships, stormed the town of Nombre de Dios, gained an immense amount of booty, and had a sight of the Pacific Ocean. This remarkable success encouraged other adventurers to prey upon Spanish commerce, and soon the ports of England swarmed with cruisers, whose exploits, crowned by the defeat of the Armada, in 1588, placed the country in the foremost position as the nursery of the most daring race of seamen and skilful navigators the world has known.

And now we will proceed to describe the discoveries of the Spaniards in the South Seas. Juan Ponce de Leon, a Spanish adventurer, conquered the island of Puerto Rico, and, in 1510, Alonso de Ojeda, accompanied by Francis Pizarro, undertook an expedition to Carthagena, which ended in disaster, John de Cosa and seventy men being killed; a colony he planted at San Sebastian, under Pizarro, was equally unfortunate, and Ojeda himself died miserably of want in San Domingo. In this year also Vasquez Nunez de Balboa—who, being under sentence of death had escaped to sea in a ship's

hold, headed up in a bread-cask, where he remained for four days—induced the captain, Encis by name, to proceed to the river Darien, where they founded a colony, another one being planted at Nombre de Dios by Diego Nicieesa, who perished miserably.

On the 1st March, 1512, Ponce de Leon sailed from St. German with two ships fitted out at his own expense, and, on 2nd April sighted land which, 'believing it to be an island, they named Florida,* because it appeared beautiful, having many pleasant groves, as also because they discovered it at Easter, which the Spaniards call Pascha de Flores.' Leon now coasted along the shore, naming a river De la Cruz, a headland Cape Corrientes (because of the stormy currents), and several islands including the Tortugas. During this voyage, and, indeed, all those of these Spanish navigators, except Columbus, they came into constant collision with the natives, and great slaughter ensued on both sides. A ship was now detached to proceed to the island of Bisnine where the Indians said there was a spring that made old people young, and the discovery of this Fountain of Youth and a river in Florida, which, according to Indian folk-lore had equal virtues, was one of the main objects of the voyage.

In November, 1511, Diego Velasquez commenced to conquer and settle the island of Cuba, under authority of James Columbus (or Diego Colon, as the Spaniards call him), eldest son of the great navigator, who, in 1508, had succeeded to the Governorship of Hispaniola in succession to his father's enemy, Nicholas de Obando; and, in February, 1517, he despatched an expedition consisting of two ships and 110 soldiers to make dis-

* In point of fact, Sebastian Cabot can claim the honour of discovering Florida, though Ponce de Leon has been credited with it.

coveries under Ferdinand de Cordova. They landed at Campeachy, but became embroiled with the natives, and fifty-six men were killed, Cordova dying himself ten days after his return to the Havanna. On the 8th May, in the following year, Velasquez despatched a second expedition, consisting of three ships and 250 men, under the command of Juan Grijalva, and, sailing along the coast of Florida, named the country they explored New Spain, and made many discoveries. Encouraged by the success of this voyage, Velasquez resolved to conquer the countries recently discovered, and appointed to the command Hernando Cortez, who had arrived at Hispaniola in 1504, and, during the war in Cuba, had been distinguished for his courage in action and capacity in council.

Cortez sailed from St. Jago, in Cuba, on the 18th November, 1518, and, on the following 10th February, left Havanna with ten ships, among his officers being Alverado, who had sailed with Grijalva and Montejo. Cortez landed at Talasco, where he gained his first victory, 800 Indians being slain, and, proceeding along the coast in his ships, received an embassy from Montezuma. He founded a colony at Vera Cruz, and, after fighting many battles with great loss to the natives, marched out of Tlascala with 300 men, and on the 8th November, 1519, entered Mexico, where he was received by Montezuma. Fearing treachery, he seized that prince, who was compelled to acknowledge himself a vassal of the King of Spain, and was soon after killed while attempting to pacify his subjects who had risen in revolt.

In the meantime Velasquez, jealous of Cortez's power and success, despatched Pamphilo de Narvaez, with a second expedition, to supersede him, but Cortez defeated this officer and took him prisoner, though he

himself was compelled to abandon Mexico. On receiving large reinforcements from Spain, Cortez renewed the war, marched on Mexico, and, after prolonged and severe fighting, secured the person of Guatimozin, the new emperor, and the surrender of the city. He now carried his victorious arms through the country, though his military skill and daring were stained by the execution of Guatimozin for conspiring against him, and the revolting cruelties he and his generals perpetrated. In 1528 Cortez proceeded to Spain, where he was received with great honour by the Emperor Charles V., and, in the following year, he returned to Mexico as Captain-General.

In 1531, Nuno de Guzman, a cruel leader, built the towns of Compostella and San Miguel, and, in May of the following year, Cortez sent from Acapulco two ships, under the command of Diego Hurtado de Mendoza, to explore the coast, but the commander and the crews of both ships were massacred by the natives, only two men escaping with their lives. Cortez despatched two other ships, on the 30th of October, 1533, to search for Hurtado de Mendoza, one commanded by Bezerra de Mendoza, and the second by Hernando de Grijalva, but the former was killed by his mutinous crew, who were slain, with the exception of three or four men, by the natives in a bay, afterwards called Santa Cruz, in the Gulf of California. Grijalva, according to Galvaom, discovered an island in 19° N. lat. (according to Herrera in 20° 20′), to which he gave the name of St. Thomas, and thence returned to New Spain.

In 1536, Cortez himself sailed with three vessels towards the north-west, and proceeded as far as 23° 30′ N., where he found a good harbour to which he gave the name of Santa Cruz. Here he landed settlers, and

despatched the vessels for more people and supplies, when two of these were lost; but Cortez sailed in the third a distance of fifty leagues, 'in a sea like the Adriatic,' says Gomara, and returned with provisions to the colonists. Bernal Diaz de Castillo, in his 'History of the Conquest of Mexico,' says of this voyage of Cortez that he 'met with California which is a bay.' While here, early in 1537, Cortez learned of the appointment of Antonio de Mendoza as viceroy, upon which he returned to Mexico, leaving Francisco de Ulloa in command.

In July, 1539, Cortez sent three small vessels of 120, 33, and 20 tons, under Francisco de Ulloa, from Acapulco, to make further discoveries. Ulloa proceeded up the Gulf of California, and found that country to be a peninsula, not an island, which, says Preciado, in his narrative, 'was the cause of great wonder.' On the 8th of October, having sailed as far as 32° N. lat., to a harbour which he called after San Andres, Ulloa returned to Santa Cruz with two ships, the third having been lost.

Ulloa continued his explorations to the northward, and the discoveries initiated by the enterprise of Cortez are more honourable to his name than his conquests, which were stained by acts of great cruelty, and it is to be regretted that the name of Mar de Cortez, long applied to the Gulf of California, was changed for its present appellation. In 1540, being dissatisfied with his position under Viceroy Mendoza, he returned to Spain, where he died on the 2nd December, 1554, in his sixty-third year, and his body was sent out to New Spain, now known as Mexico, for interment.*

* For account of Cortez's discoveries, see vol. i. of Harris's 'Collection of Voyages and Travels,' where also may be found the narrative of the services of Pizarro.

The name of Nunez de Balboa is for ever famous as that of the first European who saw the Pacific Ocean. Balboa had settled a colony on the banks of the river Darien, in 1511, which he called Santa Maria, and learning, from an Indian prince, Comagre by name, of the South Sea and of the rich kingdom of Peru, he set out from Darien, in September, 1513, and, on the 25th September, caught sight of the ocean, from a hill-top. 'On learning that he was approaching it, he commanded his men to halt, and went up alone, and seeing the South Sea, fell on his knees and returned thanks to Heaven for being the first that had seen it. Having performed this, he called his men and repeated the same; they followed his example. He then caused a certificate to be drawn up of his taking possession of that sea and all in it for the Crown of Castile.' To Nunez de Balboa might be applied the words written by the poet of Xenophon, 'the sage-exalted chief,' when, having scaled the summit of the Colchian Mountains, he exclaimed with ecstasy at the sight of the Euxine, spread at his feet—'Thalassa! Thalassa!'

> 'Kind-hearted transport round their captains threw
> The soldier's fond embrace; o'erflowed their eyes
> With tender floods, and loosed the general voice
> To cries resounding loud—"The sea! the sea!"'

By another account, two of Balboa's followers entered the Pacific before their leader. Balboa advanced down the mountains, and, we are told, sent Captain Francis Pizarro to view the sea-coast, as also John Escarry and Alonso Martin, with twelve men each, to find out the shortest way to the sea. Alonso Martin hit upon the readiest road, and, in two days, came to a place where he found two canoes. Alonso got into one of them, and bid his companions witness that he was the first who

entered the South Seas. Another, whose name was Blaez de Atienza, did the same, and bid them bear witness that he was the second. They returned to Nunez with the news, 'at which all rejoiced very much.' On the 29th September, 1513, they embarked on the newly-found sea, and having made some discoveries towards the south, in the following January returned to Santa Maria.

In return for these important services King Ferdinand, with the proverbial gratitude of kings, appointed in Balboa's stead one Pedrarias, who sailed from Spain, on April 12th, 1514, with fifteen ships and 2000 soldiers, Quevedo, a newly-consecrated bishop of Darien, and Enciso, the mortal enemy of Balboa. Pedrarias, described as a 'wicked monster,' jealous of Balboa, treated him with the greatest harshness, and at length, in the year 1517, caused him to be executed. 'Such,' says the historian, 'was the fate of Vasquez Nunez de Balboa, who, in the forty-second year of his age, suffered as a traitor for having served his prince with too much zeal and fidelity.'

Pedrarias founded a colony at Panama, whither he removed the seat of government, and soon after, James Albetez founded another town at Nombre de Dios, which, however, was abandoned in consequence of the mortality among the inhabitants, who removed to Portobello, in the reign of Philip II. In 1526, Francis Hernandez conquered Nicaragua, but Pedrarias rewarded this service by striking off his head, and, on Peter los Rios being appointed in his stead, retired to this province, the government of which he assumed. A few years later, Carthagena was founded by Peter Heredia.

The report of Nunez de Balboa's great discovery of the Pacific Ocean, by which it was ascertained beyond

a doubt that America did not extend to the East Indies, made a great noise in Europe and gave a fresh impetus to nautical research. One of the first and certainly the most important results, was the memorable voyage of Ferdinand de Magalhanes, whose name we have Anglicised, according to our custom, to Magellan. This great navigator, Portuguese by birth, had served for some years with reputation under the great Alfonso Albuquerque, and was present at the capture of Malacca in 1511. Argensola, the historian of the 'Conquest of the Moluccas,' says that Albuquerque sent Francisco Serrano, Antonio d'Abreu, and Magellan from Malacca, in three ships, by different routes, to seek for the Moluccas, but Galvaom, who was Portuguese Governor at Ternate, one of the Moluccas, in the year 1537, mentions only the two former as engaged in this voyage of discovery. Serrano sent an account of the riches of these islands to the King of Portugal, and also letters to his friend Magellan, who, having returned from Malacca, was, at this time, at Lisbon soliciting employment at the hands of Emanuel. This prince, however, says Fraz Gaspar, in his account of the conquest of the Philippines—to which, and the narratives of Martire, Barros, and Herrera, Dalrymple, and Burney, and other writers, we are indebted for material in this account of his voyage—dismissed Magellan, who thereupon offered his services to the Emperor Charles V. In the Council at Saragoza, where the conditions of service were accepted, Magellan, says Gaspar, engaged to reach the Moluccas and Western Islands in the Spanish demarcation, by the ocean, thus binding himself to discover a southern strait by which the American continent could be rounded, other than that to the Indies by the Cape of Good Hope. For the discovery of any islands

and lands within the Spanish limit, according to the partition of Pope Alexander VI., Magellan was to receive one-twentieth part of all profits and other advantages.

Five ships* were fitted out, and, on September 20, 1519, according to Gomara, sailed from St. Lucar. On the 27th December, they quitted Santa Lucia, supposed to be Rio Janeiro, and on January 6, 1520, sailed from the River Plata, and wintered at Port San Julien, in 49°. 18′ S. lat., where he quelled a mutiny of his captains, two of whom, Mendoza and Quesada, he caused to be executed and quartered, and a third, Cartagena, to be left ashore. On the 24th August, they sailed for the river Santa Cruz, twenty leagues to the southward, discovered, in the previous May, by Juan Serrano, whose ship, the *Santiago*, had been wrecked. Sailing thence on the 18th October, they discovered Cape de los Virgines, so named by Magellan, because it was discovered on St. Ursula's day (21st October). A week later, they arrived at the entrance of the strait called after the discoverer. Here it was proposed by the pilot, Estevan Gomez, that they should return to Spain, but Magellan replied, 'that if even he thought they would be reduced to the necessity of eating the hides which were on the yards, he would go to discover what he had promised the emperor.' The land separated from the continent by the strait, he named Tierra del Fuego, because they saw, in the night, many fires, and the inhabitants were called Pata-Gones, from *pata*, a hoof or paw, because they wore shoes made of the guanacos' hides.

* The *Trinidad*, 130 tons and 62 men, in which Magellan embarked; *San Antonio*, 130 tons and 55 men, commanded by Juan de Cartagena; *Victoria*, 90 tons, 45 men, Luys de Mendoza; *Conception*, 90 tons, 44 men, Gaspar de Quesada; *Santiago*, 60 tons, 30 men, Juan Rodriguez Serrano, who was also chief pilot.

Threading the straits, on the 27th November they sailed into the South Pacific, the *San Antonio* alone returning to Europe, the crew, headed by Gomez, having mutinied and wounded their captain, Mazquitta. As for the great navigator, who was of the heroic Columbus mould, we are told he shed tears and thanked the Almighty 'that he had permitted him to find what was so much desired, and that he was the first who had found the passage so much sought after.'

Magellan now steered to the northward with the three ships that still remained to him, until he reached 32° S. latitude, when he boldly struck out into the Pacific, and—with the exception of some small islands, sighted on the 24th of January and 4th of February, 1521, to which they gave the name of Las Desventuradas (the Unfortunate Islands), for there was neither food nor water on them—it was not until the following 6th of March, when they had almost perished for want of food and water, that they first sighted land, which proved to be the islands, called by Galvaom, Los Gardines (the Gardens), to which he gave the name of Ladrones,* from the thievish propensities of the inhabitants. From this group he sailed to the west, and, on the 15th of March, sighted the Philippines, to which he gave the name of the Archipelago of St. Lazarus. On the 27th of April, says Herrara, Magellan landed with fifty-five men, at the island of Mathan, one of the group, and was killed in an encounter with the savages, eight of his men, with Rabelo, captain of the *Vittoria*, being also slain, and twenty-two wounded. On the 1st of

* Galvaom writes of them as the Los Jardines, and also by the name of Dos Prazeres (the Pleasant Islands). In 1668 they were called Las Marianes, in honour of Maria Anne of Austria, widow of Philip IV. of Spain, by which name, and that of the Ladrones, they are still known.

May, their ally, the King of Zebu, who had embraced Christianity, treacherously murdered twenty-five men and officers; and the united crews of the ships, being now reduced to 115 men, it was decided to abandon the *Conception*, the oldest of the vessels, which was accordingly burnt.

Carvallo, who had basely abandoned his chief, James Serrano, at Zebu, though the Indians offered to ransom him for two guns, was now chosen commander, and Espinosa was made captain of the *Vittoria*. Making several discoveries on the voyage, they visited the islands of Panglao, Mindinao, and Palawan, and, on the 8th of July, anchored within three leagues of the city of Borneo, said by Pigafetta to contain 25,000 inhabitants. It is remarkable that the island was discovered by the Portuguese in this year (1521). Espinosa was now appointed commander in place of Carvallo, and De Cano captain of the *Vittoria*, and, after sighting the Sooloo group, and numerous other islands, on the 8th of November the two ships anchored at the island of Tidore, one of the Moluccas, which, according to Argensola, derive their name from Moluca, an Arabic word signifying 'the kingdom.' On the 13th of November, a Portuguese, Soroza by name, arrived from the island of Ternate, and informed them that twelve months before, they had heard of Magellan having sailed from Seville, and that they had received orders to oppose the Spaniards, and also that Francisco Serrano, the discoverer and first Portuguese Governor of Ternate, had died eight months before.

Having completed their cargoes of spices, on the 18th of December it was discovered that the *Trinidad* was too leaky to proceed to sea; the *Vittoria*, accordingly, sailed alone, 'with a crew consisting,' says Pigafetta, the

historian of the voyage, 'of forty-seven Europeans and thirteen Indians: fifty-three Europeans remaining behind in the *Trinidad*.' Quitting Timor, where a mutiny was quelled with the loss of several lives, on the 11th of February, the *Vittoria* rounded the Cape on the 6th of May, twenty-one men having died on the passage up to date, and arrived at St. Lucar on the 6th of September, having been absent within fourteen days of three years, during which, by the ship's dead reckoning, she had sailed 14,160 leagues. Her cargo consisted of 533 quintals of cloves, (5333 lb.), besides other spices.

Of all those who left Spain, only eighteen Europeans returned in safety, including the captain, Juan Sebastian de Cano, who was ennobled by the emperor. The names of these eighteen, as well as thirteen others detained by the Portuguese Governor of St. Jago, one of the Cape de Verde islands, which they visited, is given by Herrera, and the number includes Lombardo, who is better known as Pigafetta, the historian of this voyage. These men have the imperishable glory of being the first to circumnavigate the earth, thus placing beyond the possibility of cavil the great fact that it was a globe; and the name of Magellan, as the navigator to demonstrate this truth, is second only to that of Columbus in the annals of maritime discovery.

The *Trinidad*, after the departure of the *Vittoria*, sailed from Tidore on the 6th of April, 1522, under the command of Espinosa, with the intention of proceeding to Mexico. After an absence of four months, during which they discovered four more islands of the Ladrone group, and lost twenty-seven men, they returned to the Moluccas, and, on putting in at Ternate, Antonio de Brito, the Portuguese commander, seized the ship, and, detaining such of the crew as he thought would be

useful to him, sent the remainder away. Herrera says that forty-eight were taken to Malacca and Cochin, though some of these were probably Indians, and, after an absence of five years, a small number reached their native land.

Accounts of this voyage appear in 'Ramusio's Voyages,' said to have been written by a Portuguese seaman who sailed with Magellan; in an abridgment of Martire's MS., which was lost at the sack of Rome by the Constable Bourbon in 1527; and in the 'History of the Indies,' by Antonio Herrera. The best known and, in many respects, the most satisfactory account of this memorable voyage was, however, that of Antonio Pigafetta, one of Vicenza Magellan's companions, and an abstract of it may be found in the Collections of Harris (vol. i.), Pinkerton (vol. xiii.), and Dalrymple. As Pigafetta says of the survivors, his comrades: 'These were mariners who surely merited an eternal memory more justly than the Argonauts of old, who sailed with Jason in search of the Golden Fleece into the regions of Colchis.'

In our day, when the electric telegraph puts 'a girdle round the earth' in 80 minutes, and steam enables us to do the same in person in as many days, we can scarcely do justice to the enterprise of these wanderers on the pathless highway, and their transports on seeing again their native land. As Camolus says in his 'Lusiad':—

> 'The joy one's own dear land once more to view,
> Sweet home and kith and kin to sight again,
> With whom old voyage-feats we fall anew,
> And tell of climates strange, and strange men;
> To taste the honeyed draught of praises due
> By long mischance, toil, and ill, and pain,
> Each hath of pleasure such a perfect store,
> The hollow vessel of man's heart brims o'er.'

CHAPTER XIII.

The Career of Pizarro—His Conquests and Discoveries—Orellana sails down the Amazon—The Voyages of Juan Diaz de Solis, Loyosa, Urdaneta, De la Torre and Saavedra—Exploration of New Guinea by Saavedra—Discovery of the Bermudas—Voyage of Sebastian Cabot to the Plate River, of Alcazova to the Straits of Magellan, and of Grijalva and Carmargo to the Pacific—Exploration of the American Coast beyond California by Cabrillo, of the Philippine Islands by Villalabos, and of the Chilian Coast by Ladrilleros—The Voyage of Urdaneta and De Legaspi, and their Discoveries in the South Seas—Discovery of Juan Fernandez by that Navigator, and of the Solomon Islands by Mendana.

We now come to the discoveries and conquests in South America, made by Francis Pizarro, Diego de Almagro, and Ferdinand Luquez, who, inspired by the *aura sacra fames*, in the year 1524, being then resident at Panama, entered into a partnership to conquer the Southern Continent. Pizarro had served with Ojeda, who left him in command of the colony he settled at Darien, and also under Nunez de Balboa; Almagro took his name from the town of his birth in Spain; and Luquez, or Lugne, the third member of this triumvirate for the conquest of a great empire, was a priest, and being a man of large private means, his chief function was to supply the sinews of war.

In November, 1524, Pizarro sailed in a ship with 114 officers and men, and, soon after, was joined by Almagro with two other ships and sixty men. For two years they had much ill-fortune and heavy losses through

illness, though they explored the American coast as far as 30° S. latitude, but not receiving the necessary support in supplies and reinforcements from the Governor of Panama, Pizarro proceeded to Spain and presented himself before Charles V. at Toleda. The emperor, on 26th July, 1528, conferred on his enterprising subject the title of captain-general of all the country he might conquer, Luquez being made Bishop of Tombez in the Bay of Guayaquil, of which city Almagro was constituted governor.

In January, 1530, Francis Pizarro embarked from Seville with his four brothers, who were settled at Truxillo, in Estramadura, and he and his followers, to the number of 185 men, with forty-seven horses, sailed from Panama in three ships. Assisted by the internecine war between the brothers and rival Incas, Atahualpa and Huescar,* the latter of whom was put to death by the former, Pizarro now commenced his career of conquest, receiving reinforcements from Panama and Nicaragua, under De Sota and other adventurers ; but the pages of Herrera and De la Vega are stained with his sanguinary deeds, and, indeed, the whole account of the Spanish conquests in these countries is a record of intrigue and bloodshed. According to Harris, the booty they acquired was equal to 15,000,000 sterling, and it is stated in a MS. of Sir John Hawkins, that the meanest of Pizarro's soldiers had £2000 for his share, and some twice that share.'

In 1531, Pizarro founded the first Spanish colony in Peru, at a point on the sea-coast he called St. Michael, near the Bay of Guayaquil, and, having overcome a rebellion caused by the judicial murder of Atahualpa,

* The famous Peruvian ironclad was named after this Indian prince.

entered Cuzco, the capital of Peru, in October, 1532, and reduced Quito and other provinces of the empire. In 1534, Pizarro founded colonies and towns on the sea-coast, one of which was called Los Reyes (now known as Lima), and another, Truxillo, after his birth-place. In the following year, Almagro entered upon the conquest of Chili, but was compelled to retreat, and, soon after his return to Peru, which was torn by civil war, in which the Spanish participated, he fell into the hands of Ferdinand Pizarro, who caused him to be executed, for which, on his return to Spain, he suffered an imprisonment of twenty-three years.

The great Pizarro soon met with the fate of his associate, Almagro. His brother, Gonzalo, who was an able commander, effected the conquest of the Charcas, in which were the mines of Potosi, and, in 1538, Pizarro found himself master of a country, 700 or 800 leagues in length, extending southward from the equinoctial. In the following year, he founded Arequipa, and, in 1540, despatched Peter de Valdivia into Chili with a force. At this time Gonzalo, whom he appointed Governor of Quito, effected some important discoveries inland, and the Spanish historians state that 'one of his captains, named Orellana, by his direction sailed down the great river of the Amazons, quite to the mouth of it, and from thence returned to the Spanish settlements.' The people of Peru, adherents of the young Almagro, enraged by the tyrannies of Francis Pizarro, whose ambition and avariciousness knew no limits, at length attacked him in his palace at Lima, on the 26th June, 1541, and he and his brother-in-law, Francis de Alcantara, were assassinated.

In the meantime, Vaca de Castro arrived from Spain, and, having defeated Almagro in battle, in September,

1542, that officer, though only twenty years of age, met with the same fate as his father. Recently a very interesting letter from Vaca de Castro, has been published by the Spanish Government, with others, giving an account of these events. This work, called 'Cartas de India,' forming a large volume of 877 folio pages, contains also two autograph letters from Columbus to King Ferdinand and Queen Isabella, and a letter from Vespucci, and others of great interest from contemporaries.

In 1544, Blasco Nunez Vela was appointed Viceroy of Peru, but, on the 19th January, 1546, he was defeated, taken prisoner, and decapitated by Gonzalo Pizarro, who himself suffered a like fate on the 9th April, 1548, at the hands of Peter de la Gasca, appointed viceroy by the emperor. In the same year that the great Pizarro was assassinated, the first Spanish town in Chili was founded by Pedro de Valdivia, who gave it the name of Santiago.*

To her possession of gold, Peru owed her ruin; and Spain, inspired by that avarice which has been her curse, yielding to the mad desire to grow rich without toil, has paid the penalty of her rapacity and cruelty to the barbarous races of South America, whom she conquered for the sake of possessing their gold mines.

> 'Let Peru
> Deep in her bowels her own ruin breed,
> The yellow traitor that her bliss betray'd—
> Unequall'd bliss—and to unequall'd rage!'

While Cortez was conquering Mexico, and Pizarro, Peru, other great Spanish captains and experienced seamen were employed in discovery. In 1512, Juan Diaz de Solis discovered the great river La Plata, so named from the quantity of silver seen there, and, three years

* Herrera's 'Descripcion de las Indias Occidentales,' chap. xxii.

later, King Ferdinand again sent De Solis to explore the coast of South America, and endeavour to discover a passage into the Pacific and the Moluccas, though by the discovery of the isthmus of Panama, and the establishment of a colony at that place, it soon came to be understood that the passage from Mexico (or New Spain) to these islands was shorter than that by the straits discovered by Magellan.* De Solis and several of his followers were killed in a quarrel with the natives of the Plata River, but his name was given to a small island and two rivers on its northern bank.

In order to prosecute the search for supposed treasures, many expeditions were fitted out from New Spain, in Mexico, which resulted in discoveries of importance. In 1522, Gonzales d'Avila sailed with four vessels from Panama, to 17° 30′ N. lat., and, in this year, Cortez founded a town at Colima, and his discoveries connecting those made by Andres Nias, a general knowledge of the coast was obtained from that town to the Gulf of San Miguel. In 1525 took place

* Martire, a contemporary writer (see Eden's translation), says: 'There came to me the day before the ides of October this year, 1616, Rodriguez Colminares and Francisco de la Puente, who affirmed, one that he had heard of, the other that he had seen, divers islands in the South Seas, to the west of the Pearl Islands, in which trees are engendered and nourished, which bring forth aromatic fruits as in India, and therefore they conjecture that the land where the fruitfulness of spices beginneth, cannot be far distant. And many do only desire that leave be granted them to search farther, and they will of their own charges furnish ships, and adventure the voyage, to see these islands and regions. And they think it better that ships should be prepared in the Gulf de St. Miguel, than to attempt the way by the Gulf of St. Augustine (in Brazil) which is long, difficult, and full of danger, and is said to reach beyond the 40° of latitude towards the Pole Antarctic.' Martire, it should here be noted, was a Milanese (generally known as P. Martyr de Angera) employed in the service of Charles V. as Commissioner for the affairs of the Indies.

the voyage of De Loyosa from Spain to the Moluccas, with an expedition, consisting of six vessels and a pinnace, having on board 450 persons, Sebastian del Cano, who brought home the *Vittoria* of Magellan's expedition, being second in command. When passing into the South Sea, one of the ships, commanded by Francisco de Hozes, was driven to the southward to 55° S. lat., and one of the officers, Urdaneta, himself a famous discoverer, in the 'Noticia de las Expedicion Magellanes,' expresses his belief that the land then seen was Cape Horn, though Captain Burney is of opinion (see vol. i. p. 134) that it was Staten Land. Both Cano and De Loyosa died in July of the following year, when in the Pacific Ocean, in 4° N. lat., and ultimately, after following in the track of Magellan's expedition, the ships, under Hernando de la Torre, visited the Ladrones and Moluccas, where they engaged for many years in hostilities with the Portuguese, but with small success.

Meanwhile, Cortez, learning of the arrival of Loyosa's ships for the conquest of the Moluccas, sent his kinsman, Alvaro de Saavedra, from New Spain, on the 31st October, 1527, with three vessels, the *Florida*, fifty men; *St. Jago*, forty-five men; and *Espiritu Santo*, fifteen men. Two of them were never heard of when about one hundred leagues from land, but Saavedra arrived, in the *Florida*, at the Ladrones, and, after visiting Mindinao and other islands, anchored at Ternate early in 1528. Saavedra assisted De la Torre in his operations against the Portuguese, and, on the 3rd June, sailed on his return to New Spain.

On the voyage he made many discoveries, including an island, said to have been New Guinea, to which, says Argensola, in his 'Conquest of the Moluccas,' he gave the name of Isla del Oro, but which received its present

name, according to Burney, from the inhabitants resembling in appearance the people of Guinea, on the African coast. After a stay of a month here, they set sail, and, exploring about fifty leagues of this island beyond what had been discovered by Meneses, proceeded to the north-east, as far as 14° N. lat., and eventually bore up for the Moluccas. After careening and repairing the *Florida*, Saavedra sailed the second time from Tidore, in May, 1529, and coasting, according to Galvaom, above 500 leagues along the coast of New Guinea, to 4° or 5° S. lat., visited groups of islands he calls Los Pintados (Painted People), in 7° N. and 176° W., and Los Buenos Jardines (Good Gardens), 10° to 12° N. and 174° W. When in lat. 27° N., Saavedra died, and, eight days later, his successor, Pero Laso, also expired, and the crew, after shaping their course as far as 31° N., according to the instructions of their late commander, when they were about 1200 leagues from the Moluccas, and 1000 leagues from New Spain, returned to Tidore.

At this time the total strength of the Spaniards was only between ninety and one hundred men, and at length De la Torre, seeing the hopelessness of struggling with the Portuguese for the possession of the Moluccas, which Charles V. had pledged to the Crown of Portugal for 350,000 ducats, consented to depart with his people, and, in 1534, the survivors were conveyed to Cochin, in vessels belonging to the Portuguese, when they made their way to Europe. In January, 1537, Urdaneta, one of the officers, arrived in Spain, and was followed soon after by Hernando de la Torre, who was well received by the emperor. By the treaty of 1529, between the Emperor Charles V. and the King of Portugal, all the countries lying to the west of a meridian dawn at 17° E. from the Moluccas, were relinquished or pledged to the Portuguese.

In April, 1526, Sebastian Cabot, who had long been in the service of the English Crown, sailed from Seville with four ships, for the purpose of proceeding to the Moluccas, but owing to a great lack of stores, he confined his researches to the River La Plata, and discovered part of the adjacent coast; while here he was joined by some shipwrecked mariners from one or two Genoese vessels which attempted to pass through the Straits of Magellan. A similar failure attended an attempt made by other vessels from Galicia and Portugal, to proceed to the Spice Islands. In 1527, Francis de Montejo settled and subdued the country of Yucatan, and about the same time, according to Harris, John Bermudez first saw one of the islands which have been named after him. A Portuguese, Simon de Alcazova by name, contracted with the King of Spain to discover and people 200 leagues of the Peruvian seacoast, beginning from the southern limits of New Toledo, as the Government of Almagro was called, to distinguish it from the northern province, under Pizarro's authority, called New Castile.

Alcazova sailed from San Lucar on September 21, 1534, with two ships manned by 250 men, and, on the 17th January following, they entered the Straits of Magellan. While here, an expedition was undertaken to examine the country, which met with little success, and Alcazova, the chief pilot, and several men were murdered by a portion of the crew, who mutinied and seized the ships, though the mutineers were soon overpowered, and their leaders and six men were executed. Rodrigo de la Isla and Juan Mori assumed command of the ships, which sailed for the West Indies, but misfortune dogged their steps. One ship was wrecked on the coast of Brazil, where most of

the crew were killed by the natives, only twenty men out of 110 escaping in a boat to the *San Pedro*, which at length arrived at Hispaniola.

In 1535, Peter de Mendoza founded the town of Buenos Ayres, on the River Plata, which city was twice abandoned and twice rebuilt. Two years later, the province of New Granada was discovered, and Grijalva and Alvaredo were sent by Cortez with two ships to assist Pizarro in Peru and make discoveries, of which Galvaom, Portuguese Governor of the Moluccas, gives an account, though his data and distances traversed are very inaccurate. Grijalva was murdered by his crew, who abandoned the ship at New Guinea, and the survivors, seven in number, eventually found their way to the Moluccas. A remarkable voyage was made, in 1539, by Alonso de Carmargo, who sailed from Seville with three vessels, one of which passed through the Straits of Magellan, and coasting along South America, arrived at Arequipa; but one of the squadron was wrecked and the third returned to Spain without passing into the Pacific.

Mendoza, Viceroy of Mexico, continued his explorations of the American coast, set on foot by his predecessor, Cortez. In 1540, Hernando de Alarcon, went 4° beyond Ulloa, in the preceding year, and Vasquez de Cornado penetrated, with a small force, to 40° N. latitude, but was compelled to retreat by the Indians. After Cortez returned to Europe, Mendoza and Pedro de Alvaredo collected an expedition of twelve ships and two galleys at Puerto de Navidad; but the death of the latter, who assumed command, in an action with the Indians, put an end to his plans, which included voyages to the Moluccas and China, and the viceroy had to take the field in person to stop the progress of the natives in New Galicia.

Juan Rodriguez Cabrillo, however, proceeded to sea on June 2, 1542, with two vessels, the *San Salvador* and *Vittoria*, for the purpose of exploring the coast to the northward of the peninsula of California. Herrera, who gives an account of this voyage, says that, on March 1, they attained as high as 44° N. latitude, (a point which was not passed until 1579, by Sir Francis Drake,) but, owing to the severity of the weather, and their bread being all expended, were compelled to return to the southward, and arrived at Puerto de Navidad on April 14, 'sorrowful for having lost their commander, who was carried off by sickness.' Though Cabrillo sailed to 44°, Burney says that Cabo de Fortunas, in 41°, appears to have been the most northern land seen by him, and Miguel Vinegas, author of 'Noticia de la California,' mentions that he named a cape, in about 40° 30′, Mendocino, after the viceroy, which it still bears.

In this year also Mendoza fitted out a squadron of three vessels, a galley and two pinnaces, with 370 men, to explore the islands discovered by Magellan, on March 16, 1521, after leaving the Ladrones, to which he gave the name of Archipelago of St. Lazarus. His brother-in-law, Lopez de Villalabos, was appointed to the command, and sailed on October 31, 1542, and, on arriving at the group, gave them the name of Las Philipinas, in compliment to Prince Philip, which they have since retained. On April 24, 1544, he arrived at Gillolo, whence he proceeded to Tidore. One of his ships, the *San Juan*, made two attempts to return to Mexico, but failed, owing to the want of provisions and the prevalence of calms, and eventually, as the vessels were in a decayed condition, Villalobos accepted an offer of the Portuguese to furnish them with a passage to Europe by way of India. Some elected to remain in the Moluccas, but the

rest embarked and proceeded to Goa, and thence to Lisbon, where they arrived in the latter part of the year 1547; but the commander of the expedition, broken in health, and disgusted with the failure of his mission which had for its object, according to Grijalva, the colonisation of Zebu, one of the Philippines, died at Amboyna where they stopped on the passage.

In 1551, Mendoza was succeeded in Mexico by Luis de Velasco, and proceeded to Peru as viceroy; but he died in the following year, greatly regretted as an able and mild governor, forming a marked contrast to the sanguinary tyrants who represented their sovereign in the New World, among the number, Pedro de Valdivia, Governor of Chili, who was killed in an insurrection by the natives. Before his death Valdivia had despatched from the city, named after himself, which he had founded in the previous year, two vessels, under Francis de Ulloa, to explore the southern coast, and Herrera mentions that this officer examined that portion between the city of La Concepcion and the Straits of Magellan. In November, 1557, Garcia Hurtado de Mendoza, the new Governor of Chili, son of Hurtado de Mendoza, Marquis de Canete, now Governor of Peru, despatched from Valdivia two vessels, the *San Luis* and *San Sebastian*, under Juan Ladrilleros, to examine the southern portion of the Chilian coast, but the expedition ended in disaster. One ship returned to Valdivia with only a few of her crew remaining, and though Ladrilleros showed great determination in quelling a mutiny by hanging the ring-leader, and continued the minute examination of the coast, and afterwards of the strait to its eastern entrance, he actually returned to Chili with only one seaman and a negro besides himself. Figueroa says that seventy men died in this expedition, but the pertinacity

and heroism of the commander was of that old Spanish type which has given to geography a knowledge of those remote seas and lands.

Though the Straits of Magellan were explored, it was not until 1589 that Pedro Sermiento settled a colony there, of which Harris gives a detailed history in his first volume. In 1537, the province of New Grenada was explored, and, six years later, occurred the discovery of the mighty river Mississippi, by Louis de Alvarado, —who must not be confounded with the great Alvarado Pedro, the companion of Cortez in the conquest of Mexico—the exploration of which was completed, says Harris, in the year 1582. When Philip II. succeeded to the throne of Spain by the abdication of his father, the project of colonising the Philippine Islands was revived, and in 1559, orders were sent to Louis de Velasco, Viceroy of Mexico, to equip an expedition, and Andres de Urdaneta, the companion of Loyosa in his famous voyage of 1525, who, on his return to Spain after twelve years' wanderings, had entered a monastery, was commanded by the king to undertake the pilotage and general conduct of the expedition. Urdaneta consented, and selected for the command, with the rank of Captain-General, Miguel Lopez de Legaspi, then in his fifty-ninth year, but owing to the death of De Velasco, the expedition did not sail from Puerta de la Navidad until November 21, 1564. It consisted of the *San Pedro*, 500 tons; *San Pablo*, 400 tons; *San Juan*, 100 tons, and *San Lucar*, forty tons; and the united crews numbered 450 persons. They passed islands, which they named De los Barbudos (bearded people), De los Plazeres (having shoals), Las Harmanas (sisters), Los Jardines and other islands, and, on January 22, 1565, anchored at Guam, one of the Ladrones. They

left Guam on the 3rd of February, and, on the 13th, arrived at one of the Philippine Islands, called Tandaya by Franz Gaspar, who describes the voyage in his 'Conquest of the Philippines.' They also visited other islands of the group, and one of their objects being the conversion of the people to Christianity, on May 8, 1565, a colony was established at Zebu, the island which had nominally been converted by Magellan, and where twenty-eight of his followers were ruthlessly massacred.

On the 1st of June, Urdaneta returned in the *San Pedro* to Mexico, and arrived at Acapulco towards the end of September, sixteen of the crew having died on the passage, including the captain, De Salcedo, nephew of the captain-general. That the ship arrived in safety, was due to the seaman-like skill and knowledge of navigation possessed by Urdaneta, who, says Burney, 'proved the practicability of sailing from the East Indies to Mexico, kept journals with the greatest care, and made a chart of those seas which for a long time served as a guide for subsequent navigation.'* Legaspi took possession of the Philippines in the name of his sovereign, and vessels were sent from Mexico to these islands in the years 1566 and 1567, from which date a constant communication was maintained. The Spaniards soon extended their so-called 'pacifications' to other islands, and in 1571 Legaspi founded the city of Manilla, which has ever since been the capital of the Spanish possessions in the Philippines.

* The *San Lucar*, which deserted from the fleet early in the voyage, and after proceeding to Mindanao, arrived at Mexico three months before the *San Pedro*, made the passage first in point of time, but no journal or chart was kept of the voyage. Arellano, the captain, had the hardihood to proceed to Spain and solicit rewards for his conduct, but on the arrival of Urdaneta, he was sent back a prisoner to Mexico, to be delivered to Legaspi at the Philippines.

In the year 1563, according to the Gazetteer of Alcedo, occurred the discovery of an island which, in the estimation of English-speaking people, has been invested with a halo of romantic interest since the time when De Foe made it the scene of that best-known and most wide-read of all fictions, 'Robinson Crusoe,' who, it need scarcely be added, was intended for Alexander Selkirk. A Spanish pilot, by name Juan Fernandez, was, according to the 'Memorial' of Juan Luis Arias, quoted by Dalrymple, the first to depart from the custom hitherto invariably practised by vessels proceeding from one port to another along the coast of Peru and part of that of Chili, of keeping close to the land, from an idea that if they lost sight of the coast, the trade-wind would render their return impracticable. Fernandez stood out some distance from the land, and finding the wind favourable for running to the south, sailed in that direction till he was beyond the influence of the trade-wind, and then made the passage more expeditiously than could be performed by the inshore navigation.

Thus several islands* were discovered, one being called Juan Fernandez, after the discoverer, and a second, twenty-eight leagues to the westward, Mas-a-fuera (more without). The group of islands, under the equinoctial line, called the Galapagos, from their being frequented by the turtles (the discovery of which is attributed by Harris to Captain Cowley, an Englishman, more than a century later), appear with the same name in the map of America and the South Seas, in the 'Theatrum Orbis Terrarum,' of Ortelius, edition 1570, and, as early as 1516, Martire makes mention of islands to the west of the Pearl

* Juan Fernandez is about 115 geographical leagues from the continent, and the writer of Commodore Anson's voyage mentions that the discoverer obtained a grant of the island, and resided in it for some time.

Islands, in the Gulf of Panama. The islands called Malpelo (ill-covered or bald) and Cocos, first called Santa Cruz, also appear in the same edition of Ortelius, but not the islands discovered by Fernandez or those called San Felipe and San Ambor, which the same navigator discovered in 1574, and which were visited by the first Englishman, Captain Colnet, in 1593.

Old writers attribute to Juan Fernandez the discovery of a southern continent, a belief in which, even up to the time when Captain Cook exploded the notion by his explorations in Antarctic regions, existed throughout Europe, such experienced seamen and scientific geographers as Dalrymple sharing in the delusion. Juan Luis Arias, in his 'Memorial,' which is without date, but was written after the year 1609, when the English settled in the Bermudas, as that event is mentioned, says: 'The pilot Juan Fernandez sailed from the coast of Chili in a small ship, and navigating upon courses between the west and south-west, arrived in a month's time at a coast, which as far as they could judge appeared to be a continent (*tierra firme*).' He adds that having insufficient supplies they 'sailed to Chili with the intention of again returning to the same land, better provided; but the matter was delayed from day to day till Juan Fernandez died, and with his death, this important business fell into oblivion.' It is not at all improbable that the land then seen was New Zealand.

In 1567 occurred the important voyage of Alvaro de Mendana, or Alvarez de Mendoza, as he is also called (relative of Lopez Garcia de Castro, Governor of Peru), who discovered the Solomon Islands.* Mendana, whose

* The original account of this voyage is given by Figueroa in Book v. of a work entitled 'Hechos de Don Garcia Hurtado de Mendoca,' printed at Madrid in 1613, of which Dalrymple and Burney give a

chief pilot was Hernan Gallego, who had accompanied Ladrilleros, sailed with two vessels (as is gathered by the narrative, though the numbers are not specified), from Callao, on the 10th of January, 1567, and, after sailing, with contrary winds, 1450 leagues, discovered a small inhabited island, in 6° 45′ S., which Mendana named Isla de Jesus; 160 leagues distant he saw some more small islands, situated amidst reefs, which he called Baxos de la Candelleria (shoals of Candlemas). He then discovered also another large island, the first of the Solomon group, which he named Santa Isabella. Figueroa gives an account of the remainder of these islands, to each of which Mendana gave names, and he landed and took possession of the Island of Guadalcanar, at a port he called De la Cruz, near a river he named Gallego. Thence Mendana proceeded, stopping occasionally 'at different islands and rivers, too many to particularise,' at some of which the natives were hostile.

On the 13th of June, the ships sailed from De la Cruz, and came to another island, to which was given the name of San Christoval, where, as at Guadalcanar, they came into collision with the natives. Mendana, having completed his explorations of the group, sailed for Mexico, and arrived on the 22nd of January, 1568, at Santiago, where he was joined, three days later, by his second ship, from which he had been separated by a storm, wherein both vessels lost their mainmasts. According to Lopez Vaz,* Mendana named his discoveries

resumé in their works. Dalrymple has extracts from the works of Acosta, Lopez Vaz and Herrera, on the situation and extent of these islands, which he says are those named New Britain by Dampier. In Hakluyt, vol. iii. p. 467, is a short description of the group by an Englishman named Hawks. As is usual with the old Spanish navigators and writers, it is difficult to identify their discoveries.

* See vol. iii. of Hakluyt, edition of 1600.

the 'Isles of Solomon, to the end that the Spaniards, supposing them to be those isles from whence Solomon fetched gold to adorn the Temple of Jerusalem, might be the more desirous to go and inhabit the same.'

Herrera, in the beginning of his 'Descripcion de las Indias,' quoted by Dalrymple (vol., i. p. 44), says that 'the Solomon Islands are 800 leagues from Peru,' and afterwards he says 'they are 1500 leagues, and from 7° to 12° S. latitude.' Joseph Acosta and Lopez Vaz also place them 800 leagues from Peru. Arias says in his 'Memorial,' that the Archipelago consists of 'thirty-three islands, great and small, their middle in 11° S., according to his relation.' Harris, in his account of the voyage of Commodore Roggewein, attributes their discovery to Alonzo Saavedra; and on the whole it may be said that there are few voyages regarding which such a mystery exists as to the identification of the discoveries made in its course, as that of Mendana.

In nearly all the Spanish voyages, especially those of Saavedra, De la Jorre, Urdaneta, and Ladrilleros, one is struck with the great loss of life sustained by the crews, from the treacherous attacks of savages, and the hardships incidental to deprivation for months of fresh provisions, or a sufficient supply of water. Every league of sea traversed, and every square mile of tropic island first visited, has become sacred by the bones of some martyr to the science of Maritime Discovery. In the words of the vigorous translation of Camolus' 'Lusiad,' recently made by my friend, Captain Richard Burton:—

> 'At last, in tangled brake and unknown ground,
> Our true companions, lost for aye, we leave,
> Who 'mid such weary ways, such dreary round,
> Such dread adventures, aidance ever gave.
> How easy for man's bones a grave is found,
> Earth's any wrinkle, ocean's any wave.'

CHAPTER XIV.

The English in the South Seas—Privateering Venture of Oxnam—Memorable Voyage of Circumnavigation by Sir Francis Drake—Sir Thomas Cavendish's Voyage round the World—The disastrous Expedition of Andrew Merick—The second Voyage of Sir Thomas Cavendish—Discovery of the Falkland Islands by John Davis—The Voyage to the South Seas by Sir Richard Hawkins.

DURING Queen Elizabeth's reign Englishmen entered upon that career of nautical enterprise which placed them, at its close, at the head of maritime nations. Hitherto the hardy population who gain a precarious living by launching their fishing-boats in the stormy seas that encircle the coast of this island, were well-known for their skill as seamen, and were engaged largely in the commerce of the Mediterranean, their services being eagerly accepted by Genoese and Venetians alike; but they were now to render famous the island of their birth by their deeds in every sea. From every port and fishing village along the east and south coast of England, a hardy race of seamen poured forth to reap the fortunes said to be made in the East at the expense of the Portuguese, and in the West at the cost of the Spaniards. The land could boast many 'sucking' Drakes and Frobishers among the juvenile population, who played, like Enoch Arden,

> **'Among the waste and lumber of the shore,**
> **Hard coils of cordage, swarthy fishing-nets,**
> **Anchors of rusty fluke, and boats updrawn.'**

The first Englishman to enter the South Seas under the British flag, was Oxnam or Oxenham, who had accompanied Sir Francis Drake in 1572-73, when he sacked the town of Nombre de Dios, and made an abortive attempt to march across the Isthmus of Darien to intercept the Spanish treasure that was transported on mules from Panama to Nombre de Dios. Oxnam, three years later, leaving his ship as Drake had done, on the north side of Darien, marched across the isthmus, and, on the banks of a river, built a pinnace, forty-five feet long, in which he sailed into the South Sea; this daring sailor then proceeded to the Pearl Islands, in the Gulf of Panama, and, having captured two prizes, in which were 160,000 pesos of gold (a peso being equal to eight shillings of our money), returned to the river; but, owing to some disagreement about the division of the booty, they gave the Spaniards in Panama time to send a body of 100 men in pursuit, and the whole of the plunder was recovered, eleven Englishmen being killed. The Governor of Nombre de Dios also seized their small vessel, which had been run ashore and concealed with boughs, the guns and arms having been buried, and, at length, Oxnam and the survivors of his crew, who had been living with the Indians, were captured, and as the leader had no commission to show, but was a simple buccaneer, the whole of the survivors of the original crew of seventy men, with the exception of five boys, were executed. Thus disastrously ended the first exploit of the English in the South Seas, but Oxnam's old friend and commander, Drake, took an ample revenge for the treatment dealt to his countrymen, though, indeed, as unlicensed freebooters it was not undeserved.*

* A narrative of Oxnam's adventure is given in 'An Account of the West Indies and the South Sea,' by Lopez Vaz, which, with its author,

Captain Francis Drake, who had accompanied his kinsman, Sir John Hawkins, to St. Juan de Ulloa in 1567-8, and, four years later, had sacked the town of Nombre de Dios, received a commission from Queen Elizabeth, who, it is related in 'The World Encompassed,' presented him with a sword, with the words, 'We do account that he which striketh at thee, Drake, striketh at us.' But the good queen, though spirited and patriotic, was parsimonious like her grandfather, and the ships with which Drake undertook his memorable voyage of circumnavigation, were supplied by private enterprise. They consisted of the *Pelican* (the name of which was changed, in the following August, to *Golden Hind*), 100 tons, his flag-ship; *Elizabeth*, 80 tons, Captain John Winter; *Marigold*, 30 tons, Captain John Thomas; *Swan* (a fly-boat), 50 tons, Captain John Chester; and *Christopher* (pinnace), 15 tons, Captain Thomas Moore. The total of the crews was only 164 men. On the 15th of November, 1577, Drake, being then in his thirty-eighth year, sailed from Plymouth, but it was not until the following 13th of December, that he finally got to sea, as the *Pelican* and *Marigold* lost their masts, and had to return to Plymouth for a refit.

The ships visited Mogadore, Cape Blanco, the Cape de Verde Islands, making prizes on the way, and the river La Plata. At a port, in 47° 30′ S. lat., the *Swan* was broken up for firewood, and, at Port San Julian, in

fell into the hands of the English at Rio de la Plata, in 1586, Portugal being at that time subject to Spain, which was at war with this country. An abridged translation of the work appears in Hakluyt, vol. iii. p. 778. It may here be mentioned that the first Englishman to embark on the South Sea, was one Chilton who, in 1572, was a passenger in a Spanish vessel from Panama to Peru. According to Hakluyt, vol. iii., another Englishman, Thomas Blake, settled in Mexico in 1536.

49° 30′ S., which had been the scene of a mutiny and execution in Magellan's fleet, one Mr. Thomas Doughtie, being accused of plotting against the admiral, was executed. On the 24th of August, the fleet anchored thirty miles within the Strait of Magellan, and, on the 6th of September, entered the South Sea, seventeen days after making Cape de las Virgenes. On the 30th of September, the *Marigold* was separated from the other two ships, and was never heard of again, and when at anchor near the south-west part of the coast of Tierra del Fuego, the *Golden Hind* was driven out to sea,* upon which Captain Winter, of the *Elizabeth*, not caring to prosecute the voyage, returned through the Strait, and, visiting the river La Plata, and an island on the coast of Brazil, where he left a pinnace and eight men, arrived in England on the 2nd of June, 1579.† They were driven so far to the southward by a succession of gales which continued for fifty-one days that, as appears in 'The World Encompassed' (p. 44), they 'fell in with the uttermost part of land towards the South Pole, which stands in the 56th degree,' and anchored off the island of Tierra del Fuego, near Cape Horn.

On the 30th of October, Drake sailed alone, the other ships having parted company in the storms, and, coasting along the American shore, arrived at Valparaiso, on

* On this occasion a boat, with eight men, was separated from Drake's ship. Returning through the Strait they went to Port Julian, and from there to Rio de la Plata, where they were attacked by the Indians, all being wounded and four taken prisoners. The four others proceeded to an island, where, after enduring the extremity of suffering, two died of their wounds, and the other two returned to the mainland on a plank, their boat having been destroyed. One of these men died, and the survivor, Peter Carder, after nine years' absence returned to England.

† The account of this voyage of Captain Winter by Edward Cliffe, mariner, appears in Hakluyt, vol. iii. p. 753.

the 5th of December, where he made a valuable prize, also visiting Coquimbo, Tarapaca, Arica, Arequipa, and Callao, doing great damage to the shipping, and carrying off much treasure. From Callao he proceeded in pursuit of a ship, called the *Cacafuego*, which had left laden with treasure for Panama, and, crossing the line on the 24th February, overtook the Spanish treasure-ship, and, after a brief action, captured her. The booty taken on this occasion consisted of 'thirteen chests of rials of plates, eighty pounds weight of gold, twenty-six tons of uncoined silver,* and a quantity of jewels and precious stones, the whole being estimated at 360,000 pesos.' After taking out the treasure, the Spanish ship was allowed to proceed to Panama, and Drake, having careened his ship at a small island named Canno, two leagues from the mainland of Nicaragua, sailed to the westward and then to the northward, with the object of discovering a passage from the Pacific to the Atlantic.

Coasting along the shore of California, which he called New Albion, discovered by Juan Rodriguez Cabrillo, Drake reached a point, of which he says in 'The World Encompassed': 'Though we searched the coast diligently, even to the forty-eighth degree, yet found we not the land to bend so much as one point in any place towards the east.' Sir William Monson, also, in his 'Naval Tracts' (book iv.), commends Drake's resolution for having, 'after almost two years spent in unpractised seas, left his known course and ventured upon an unknown sea in 48°, to which latitude he arrived, thinking to find a passage into our seas.' Drake's ship having sprung a leak, he remained refitting her, for a

* The uncoined silver, at five shillings per ounce, would be worth £212,000. The peso of gold was equal to eight shillings of our money.

period of thirty-six days, in a port called after him, in 38° N. lat.,* and in 38° 30′ according to 'The World Encompased,' though Burney is of opinion that it was in the port now known as San Francisco, in 37° 48′ N. To Drake belongs the credit of having explored the Californian coast from Cape Mendocino to 48° N. lat., the Spanish navigators, Juan Rodriguez Cabrillo and Francisco de Ulloa, having discovered all the coast from that Cape to the southern extremity of the peninsula of California.

On the 23rd July, Drake, having given up his intention to seek for the fabled Strait of Anian, boldly struck out into the Pacific and steered for the Molucca Islands. On September 30th, having been sixty-eight days at sea without seeing land, he sighted some islands, in 8° N., which he called the Islands of Thieves, supposed to be the Pelew Islands, discovered by Da Rocha, and named by him after De Sequeira. Continuing his course to the westward, on the 16th October he made the Philippine Islands, in 7° 5′ N., and, having watered at Mindinao, he sailed to the southward and anchored at Ternate, where he was visited by the king who had expelled the Portuguese from that island. On the 9th November Drake proceeded on his voyage, and, on the 14th, anchored at a small uninhabited island he called Crab Island, near the eastern part of Celebes, where he remained four weeks, the crew living ashore, and the necessary repairs being done to the ship. On the 12th December, he sailed, and, after narrowly escaping destruction on a shoal, in 1° 56′ S. lat., not far from the coast of Celebes, visited Java, and then steered for the Cape of Good Hope, which was reached on the 15th June. On the 22nd July, the *Golden Hind* put into

* See 'The Famous Voyage,' in Hakluyt, vol. iii.

Sierra Leone, and, on the 26th September, 1580, after an absence of nearly three years, anchored at Plymouth.

> 'How many a rough sea had he weather'd in her,
> He knew her as a horseman knows his horse.'

Queen Elizabeth dined on board the *Golden Hind* at Deptford, and knighted Drake. The ship was preserved many years at Deptford, and when she was broken up, a chair was made of one of her planks, which may still be seen in the University of Oxford.

Drake undertook many voyages to the Spanish main against his old enemies, the Spaniards, whom he was chiefly instrumental in defeating at the time of the Armada in 1588. During one of these expeditions he died at Portobello, of chagrin at his ill-success, on the 28th January, 1595. In person he is described by Harris as 'low of stature, yet extremely well made, his complexion fresh and fair, his eyes large and lively, his hair of a light brown, and his countenance open and cheerful.'

The next Englishman to circumnavigate the globe was Thomas Cavendish (or Candish, as he is called in Hakluyt), a gentleman of substance, of Trimley, in Suffolk, who had accompanied Sir Richard Grenville to Virginia, in the *Tiger*, in the year 1585. Cavendish sailed from Plymouth, on the 21st July, 1586, with three vessels, equipped at his own expense, called the *Desire*, 120 tons, the *Content*, sixty tons, and *Hugh Gallant*, forty tons, the total number of persons embarked being 123.* Visiting Sierra Leone, where they

* A short account of this voyage appears in the first publication of Hakluyt (1589), pp. 809-13, and a more detailed narrative, by Francis Petty, who sailed with Cavendish, is given in the edition of Hakluyt of the year 1600. In June, 1586, a second expedition, fitted out for buccaneering purposes at the expense of the Earl of Cumberland, left

attacked the people, and burnt 150 houses, and Brazil, and discovering a harbour on the east coast of Patagonia, named by him Port Desire, they entered the Strait of Magellan on the 6th January, and the South Sea on the 24th February.

Proceeding along the coast in the same course taken by Drake, they put in at the island of Mocha, and the Bay of Quintero, seven leagues to the north of Valparaiso, where they were attacked by the Spaniards, and twelve men killed or captured, the prisoners being treated as pirates, and all hanged, notwithstanding that the two nations were now at open war. On the 5th April, Cavendish sailed from Quintero, and visited Arica, Paita, and the island of Puna, capturing and firing prizes on the way, though they contained little of value. Here, as at Quintero, the English were suddenly attacked by the Spaniards, and lost nine men killed, and three taken prisoners. After careening his ships, and sinking the *Hugh Gallant*, whose crew he distributed among the other ships, Cavendish sailed from Puna on the 5th June, and, continuing his course to the north, burnt the towns of Guatulco and Puerto de Navidad and some villages.* He then also visited the bays of Compostella and Mazatlan, and, on the 9th October, steered for the South Cape of California, for the purpose of intercepting the treasure-ship from the Philip-

Plymouth for the South Seas, but they proceeded no further than the coast of Brazil, where they plundered some Portuguese vessels. In one of these was captured Lopez Vaz, the author of a 'History of the West Indies and of the South Seas,' whose MS. was brought to England, and appears in vol. iii. of Hakluyt, edition 1600, and is of great value.

* Cavendish, who acted with much wanton cruelty, says in his letters to Lord Hunsden, the Lord Chamberlain: 'I burnt and sunk nineteen sail of ships, great and small. All the villages and towns that ever I landed at, I burnt and spoiled.' (Hakluyt, vol. iii. p. 837.)

pine Islands. On the 4th November the anticipated prize was sighted, and, after a severe engagement, which lasted five or six hours, she was captured, with a loss of only two men killed, the Spaniards losing twelve. She proved to be the *Santa Anna*, of 700 tons, commanded by Tomas de Alzola, and had treasure on board in specie 122,000 pesos of gold, besides a valuable cargo of satins, silks, and musk. Taking his prize into a bay on the eastern side of Cape San Lucar, Cavendish landed his prisoners, 'men and women, to the number of 190 persons,' and, having burnt the *Santa Anna*, after removing the spoil, which was divided, he sailed on the 19th November.

The two ships soon got separated, and did not meet again. The *Desire* sighted no land until the 3rd January, when the Ladrones were seen; on the 14th they made the Philippine Islands, and, on the 28th, a port on the south side of Java, whence they sailed on the 16th March. On the following 18th May, the Cape of Good Hope was passed, and, visiting St. Helena, where water was taken in, arrived at Plymouth on the 9th September, after an absence of two years and fifty days. Thus was completed the third and quickest circumnavigation of the globe, the time having been eight months less than that occupied by Drake, and eleven months than Magellan. For his gallantry in capturing the *Santa Anna*, Queen Elizabeth knighted Cavendish.

Encouraged by the great pecuniary gains resulting from the voyages of Drake and Cavendish, other expeditions to prey on Spanish commerce were fitted out by Englishmen, but they ended in failure, and, as Harris says (vol. ii. p. 163), 'It is not so much the weakness of the Spaniards as the weakness of their councils which

has occasioned their losses in those parts.' Before the next expedition left the shores of England took place the defeat of the Spanish Armada:

> 'When all the pride of Spain, in one dread fleet,
> Swell'd o'er the labouring surge; like a whole heaven
> Of clouds wide roll'd before the boundless breeze.'

But they were met by seamen as brave and more skilful than they:

> 'My dauntless Britons came, a gloomy few,
> With tempests black the goodly scene deform'd,
> And laid their glory waste.'

The first of those expeditions was one under John Chidley, consisting of five vessels—the *Wild Man*, of 300 tons, and 180 men; the *White Lion*, of 240 tons, and 140 men, commanded by Paul Wheele; the *Delight*, Andrew Merick; and two small pinnaces. They sailed from Plymouth on 5th August, 1589, but were soon separated, and we only hear further of the *Delight*, which proceeded to Port Desire, discovered by Cavendish, and, after six weeks engaged in attempting to pass through the Strait of Magellan, on February 14th, 1590, retraced her course, and, at length, arrived at Cherbourg on the 30th August, with only six men alive of her whole company of ninety-one, Andrew Merick being among those who had perished.

In 1591 Cavendish tried a second venture to the South Seas.* On the 26th August he sailed from Plymouth with 'three tall ships and two barks'—the former being the *Leicester Galleon*, flagship or 'admiral,'

* Three accounts were written of this voyage, but the fullest appears in Hakluyt (vol. iii. p. 842, edition 1600), and is by John Jane, who was engaged in it. The other accounts are in Purchas, and are by Cavendish and Anthony Knyvet (vol. iv. chaps. vi. and vii.).

his old ship, the *Desire*, Captain John Davis, the Arctic navigator; and the *Roebuck*, Captain Cocke. The aggregate crews embarked in these ships fell little short of 400 men. They captured the Portuguese settlements at Santos and St. Vincent, on the coast of Brazil, visited Port Desire, and, on April 14, entered the Strait of Magellan. Here they encountered head winds, and, at length, Cavendish, contrary to the advice of John Davis, returned eastward, and, on the 18th of April, repassed the eastern entrance of the Strait. On the 20th May, being in the latitude of Port Desire, the ships parted company, and Davis, who had had a misunderstanding with the admiral, returned with his ship and the *Black Pinnace* towards the Strait of Magellan, and, on the 14th August, according to Mr. John Jane's account, 'was driven in among certain isles never before discovered by any known relation, lying fifty leagues or better from the shore, east and northerly, from the Strait.'

Thus it was the good fortune of Davis—who had already distinguished himself by his three voyages to the Arctic regions, and had penetrated into the passage named after him as far as 72° north latitude—to discover the islands which have been successively known by the different names of Hawkins' Maiden Land, Sebaldine, after Sebald de Weert, the Malouines and Iles Nouvelles, by the French, and finally, as the Falkland Islands.

Early in September, Davis passed through Magellan Strait, but experienced such heavy weather, that he was three times driven back to take shelter. On the 4th of October, the pinnace disappeared and was not seen again, and Davis, after one more attempt, was compelled to abandon his project of seeking his fortune in the South Sea. Between the 30th October and the 22nd December, he remained at Port Desire, and then pro-

ceeded to the coast of Brazil, where thirteen men were killed in a conflict with the Portuguese; but his losses, owing to the ravages of disease, were far greater, and when the ship arrived at Berehaven, in Ireland, on the 11th of June, 1593, only sixteen persons, including Captain Davis,* remained of seventy-six, who had sailed from England.

As for Cavendish, he proceeded with the other two ships to the coast of Brazil, where he lost fifty men killed and taken prisoners in affrays with the Portuguese, among those who were captured being Anthony Knyvet, whose adventures are given in Purchas. Cavendish was afterwards deserted by the *Roebuck*, when he bent his course for England, but died on the passage, as much of disappointment as disease.

The last voyage to the South Seas undertaken by an Englishman in the reign of Queen Elizabeth, was that of Sir Richard Hawkins, who sailed on the 12th June, 1593, from Plymouth, with the *Dainty*, 300 tons; *Fanny*, pinnace, of sixty tons, Captain Robert Tharlton, and *Hawk*, victualler. After visiting Santos, where he burnt the *Hawk*, Hawkins quitted the coast of Brazil, on the 18th December, and off the Plata the *Fanny* deserted him and returned to England. On the 2nd February, 1594, Hawkins sighted the islands already discovered by Davis, in August, 1592 (of which he knew nothing), to which he gave the name of Hawkins' Maiden Land, after Queen Elizabeth, and which John Ellis, who sailed with him, describes as being fifty-five leagues off the Straits. (See Purchas, vol. iv.)

Entering the Strait of Magellan on the 19th February,

* This celebrated navigator survived to make many voyages to the East Indies, and, on the 27th December, 1605, was killed in an affray with a Japanese junk.

the *Dainty* passed into the South Sea on the 29th March, and, having captured four Spanish vessels in Valparaiso Bay, proceeded along the coast to the northward. In May he was brought to action by some Spanish vessels sent from Callao by the Spanish Viceroy, the Marquis dė Canete, but repulsed the squadron. On the 20th June the *Dainty* was attacked, near Cape St. Francisco, by two large ships and a small bark, and, after making a gallant fight for two days, was captured. According to Figueroa, in his 'Life of Don Garcia de Mendoza, Marquis of Canete,' the Spanish loss was twenty-eight killed and twenty-two wounded, and that of the English, who numbered, according to Hawkins, seventy-five men, twenty-seven killed and seventeen wounded. Hawkins (who was wounded) and his men were carried to Panama, and thence to Lima, but were released in 1596. A poetical version of this famous voyage, composed by William Ridley, is preserved in the British Museum, and Drayton, in his 'Polyolbion,' says of this great navigator:

'And Hawkins not behind the best of those before.'

After this event a long period elapsed before the English undertook enterprises to the South Seas. Not that they were cowed by the superiority at sea of the fleets of France and Spain, for the latter country never regained the sovereignty of the seas, and France scarcely dared to contest what the sailors of the Commonwealth claimed as the successors of the Elizabethan seamen:

'E'en in those troubled times when dreadful Blake
Awed angry nations with the British name.'

CHAPTER XV.

Foundation of the English Colonial Empire—Sir Humphry Gilbert's Voyage to America, and Death—The Voyages of Captains Amadas and Barlow, and of Sir Richard Grenville, who colonises Roanoke Island—Removal of the Colonists by Sir Walter Raleigh, and re-colonisation by White—Raleigh's attempt to colonise Guiana in South America—Voyages of Englishmen to the Gulf of Mexico—Unsuccessful attempts to colonise Virginia and New England by Captains Gosnold, Pringe, and Mace—Permanent establishment of British Colonists in Virginia, North Carolina, and New Jersey—Constitution of the Hudson's Bay Company—The sailing of the *May Flower* for Massachusetts—The Settlement of the Bermudas, of Nova Scotia, and Cape Breton—Renewed attempts by the English, under Sir Walter Raleigh and others, to colonise Guiana—The Colonisation of Barbadoes, the West Indies, and Honduras.

THERE is no prouder page in the history of England than that on which is inscribed the history of the foundation of her colonies. The page is written with the blood of her children, freely shed in the conflict with treacherous Indians and settlers of other nations, though their most cruel enemies were the wild and unaccustomed seas traversed by the emigrants in unsuitable and crowded ships, and the forces of nature arrayed against them, to cope with which they had little experience, and few of the adjuncts now considered indispensable in founding a new colony. But the record is a noble one, as will appear in the following pages, which give a necessarily

meagre account of the repeated efforts to plant settlements where the graves of previous colonists warned the new comers of the perils in store for them.

It was not until nearly fifty years after the French had settled in Canada, that England commenced that work of colonising which, more than anything, has raised her prestige among nations, until now, with one-sixth of the globe, she has attained a grandeur such as Rome never acquired, and as the mother of many nations, her island story must ever fill one of the largest chapters in the history of the human race. As Thomson says:

> 'Lo! swarming southward on rejoicing suns,
> Gay colonies extend: the calm retreat
> Of undeserved distress, the better home
> Of those whom bigots chase from foreign lands.
> Nor built on rapine, servitude, and woe,
> And in their turn some petty tyrant's prey;
> But, bound by social Freedom, firm they rise.'

In Queen Elizabeth's reign the Newfoundland fisheries were very extensive, and one Parkhurst writes that in the year 1578, there were about fifty English sail employed on that coast, besides 100 Spanish, and fifty Portuguese, and he adds, 'the English, whose ships were larger and better equipped, exercised a certain authority over other nations.' 'Within twenty years of that date,' says Harris (vol. ii. p. 198), 'there were no less than 200 English fishing-vessels, having on board upwards of 8000 seamen.' The first to obtain a patent from Elizabeth to colonise America, was Sir Humphry Gilbert, 'a devout gentleman and a philosopher,' who, on his mother's side, was a half-brother to Sir Walter Raleigh. By this patent, Sir Humphry and his heirs were granted leave 'not only to discover, but to plant and settle in any of these northern countries,

not in the possession of any Christian prince, with authority to govern such colonies.' His first voyage was unsuccessful, and was attended with the loss of one of his ships; but in 1583 he succeeded, with the assistance of men of rank and substance, in fitting out the following five vessels, manned with 260 men, including the colonists, among whom were shipwrights, masons, carpenters, and other artificers: the *Delight* (or *George*), of 120 tons, Captain Winter, in which Sir Humphry embarked; the bark *Raleigh* (fitted out by Sir Walter Raleigh), 200 tons, Captain Butler; the *Golden Hind*, 40 tons, Captain Edward Hayes; the *Swallow*, 40 tons, Captain Maurice Brown; and the *Squirrel*, 10 tons, Captain William Andrews.

The squadron sailed on the 11th June, and, with the exception of the *Raleigh*, which returned to England, arrived at St. John's on the 3rd August, where they found thirty-six vessels of different nations, so considerable was the fishing trade even at that early date. Sir Humphry took possession of 'the harbour of St. John, and 200 leagues every way,' in the name of Queen Elizabeth, and, on the 20th August, sailed from the harbour with the *Delight*, *Golden Hind*, and *Squirrel*, into which he had shifted his flag for the purposes of discovery. On the 29th, being off Cape Breton, the *Delight* struck, and went to pieces, when Captain Brown, who now commanded her, and nearly 100 people perished; the remainder of the crew, numbering sixteen souls, got out to sea in a boat, which, after being driven before the wind for six days and nights, during which the survivors had neither food nor water, was cast on the coast of Newfoundland, whence they were taken to England by a French ship. Sir Humphry now determined to return to England, intending to undertake a second

voyage in the following spring; but, on the 9th September, the *Squirrel*, which the gallant leader of the expedition refused to leave, foundered with all on board. The tiny craft was utterly unfitted to cope with the waves of the Atlantic, which yearly, as we know, overwhelms ships and steamers of the largest tonnage. The sea broke

'Now on the beak,
Now in the waist, the deck, in every cabin.'

The *Golden Hind* alone arrived in safety at Falmouth on 22nd September.

The following lines commemorate the death of this seaman, who has the distinction of having planted our first colonies in America:

'Eastward from Campobello
Sir Humphry Gilbert sailed;
Three days, or more, he seaward bore,
Then, alas! the land-wind failed.

'Alas! the land-wind failed,
And ice-cold grew the night;
And never more, on sea or shore,
Should Sir Humphry see the light.

'He sat upon the deck;
The Book was in his hand;
"Do not fear! heaven is as near,"
He said, "by water as by land."'

Sir Walter Raleigh, after the death of his half-brother, Sir Humphry Gilbert, procured the renewal to himself of his patent, under date 25th March, 1584, and, to carry its provisions into execution, selected Captains Philip Amadas and Arthur Barlow. These two experienced seamen sailed from England on the following 27th April, and, passing the Canaries on the 10th June, proceeded to the West Indies, whence, crossing the Gulf of Mexico,

they arrived on the coast of Florida on the 4th July. Sailing along the coast a distance of forty leagues, on the 13th 'they landed,' says the author of an old 'History of Virginia,' 'at the inlet of Roenocke, at present under the government of North Carolina, and found it to be an island twenty miles in length and six in breadth;' according to Harris, the island was called Wokoken, on the coast of Virginia, in 34° lat.

In September Amadas and Barlow returned to England with such favourable accounts of the country, that Sir Walter Raleigh—who, with the permission of the queen, had given the newly-discovered country the name of Virginia, after his sovereign—'at his own charges,' fitted out a second expedition to colonise the country, which he placed under the command of Sir Richard Grenville* (or Greenville), who is immortalised by his gallant action and heroic death off the 'Azores,' in 1591, when, with his single ship, he encountered a large Spanish fleet. The expedition, consisting of seven ships, of which the two largest, the *Tiger* and *Roebuck*, were 140 tons, sailed from Plymouth on the 8th April, 1585, and, on the 26th June, Sir Richard Grenville anchored off the coast.

In the following August he landed on the island of Roanoke—five miles distant from the continent, situated on the south side of Albemarle Sound, into which the

* The first account of Sir Richard Grenville's colonisation of Virginia was published in 1588 by Thomas Hariot. Attention has recently been drawn to the circumstances of the heroic death of Sir Richard by the ballad of the poet-laureate, but those familiar with our naval history are cognisant of the noble poem of Gervase Markham, published in 1595, of which the only two copies extant are in the British Museum and Bodleian Libraries; and also with the detailed account by Raleigh, published in the year of its occurrence (1591), which may be perused in vol. i. of Pinkerton's 'Collection of Voyages.'

Roanoke river flows—with 108 men, who were placed under the command of Ralph Lane as Governor of the new Colony, Captain Philip Amadas being constituted admiral. After a stay of only three weeks on the coast, Sir Richard sailed for England on the 25th August, and captured a rich prize on his way.

The colonists, after his departure, carrying out Raleigh's instructions, explored the adjacent part of the continent for a distance of eighty miles to the southward and 130 to the northward; but, not receiving the supplies they anticipated from the merchants constituting the Virginia Company, and living in constant dread of the Indians, who cut off all supplies, and killed any stragglers, they became discouraged, and when, in August, 1586, Sir Walter Raleigh arrived on his way home from an expedition against the Spaniards in the West Indies, at their urgent request they were embarked, and returned with him to England. A few days after their departure, Sir Richard Grenville arrived with three ships, having stores for the colonists, and, finding the place deserted, settled fifty fresh colonists, with stores sufficient for two years. This second colony had however, even worse fortune than the first, for the Indians, seeing their numerical weakness, attacked and killed them all, and when one John White came there, with three ships and ample supplies, on the 22nd June, 1587, he found their fort destroyed and the place desolate.

White, having a commission as Governor, formed a new colony and constituted the governing body under the title of the 'Governor and Court of Assistants of the City of Raleigh, in Virginia.' After struggling with much fortitude against adverse circumstances, White at length proceeded to England for fresh colonists and

provisions, and, after an absence of two years, returned with three ships, but found the fort deserted, and on one of the palisades, cut in large letter, the word 'Croatan,' the name of an island about twenty leagues to the southward of Roanoke. As the ships were proceeding thither, they were overtaken by a great storm, and, being all driven out to sea, made their way separately to England. Thus disastrously ended the third attempt to colonise a country which is now as thickly populated and as flourishing as the mother-country itself.

Sir Walter Raleigh's next attempt was to colonise Guiana, in South America, which, however, also ended in disaster. This remarkable man, eminent alike as a warrior, courtier and scholar, had collected accounts of the discoveries of the Spaniards in this part of the South American continent, from which it appears that when Pizarro was engaged in his career of conquest, he ordered his brother, Gonzalo, after he had taken possession of Quito, to continue his expedition into the interior and annex all the country down to the sea. Gonzalo accordingly marched from Zumaque, and, coming to a river, embarked the sick and baggage, with a guard of fifty soldiers, under Francis Orellana, in a vessel, with strict orders to join him every night at his camp. But this officer, finding the river widening as they proceeded to the eastward, left his commander to shift for himself, and, fighting his way through the opposing tribes of Indians, passed down the river* to the sea, and proceeding to the island of Trinidad, sailed thence in a ship to

* Harris (vol. ii. book i. chap. iii. p. 211) says that this river received the name of Amazon from the number of Indian women who fought against the Spaniards. The island of Trinidad is, however, at the mouth of the Orinoco.

Spain. Having received a commission from the Emperor Charles V., Orellana sailed with three ships for the river in the year 1549, but his men were so reduced by disease, that he had to abandon two of his ships, and the third was shipwrecked near Caracas, where the rest of his men died, and he himself expired on the island of St. Margaret of 'downright despair.'

In 1560, Peter de Orsua left Cusco, in Peru, with 700 men, to continue the enterprise begun by Orellana, but the expedition miscarried. Orsua was assassinated, as was also his successor, Gusman; but Lopez d'Aquira, a monster of cruelty and iniquity, assumed the command and passed down the river to St. Margaret. This island and the neighbouring coast he desolated, but was at last captured and executed at Trinidad.

The first to attempt the conquest of Guiana by the River Orinoco, was Diego d'Ordaca, who sailed from Spain in 1531, with 630 soldiers; but the expedition miscarried, as did several others, the last being undertaken by Antonio de Berreo, of which a report was made by Captain Whiddon to Sir Walter Raleigh. After the defeat of the Spanish Armada, and in retaliation for the attempt to seek to impose the yoke of Spain on their country, Raleigh, Hawkins, and the other great Elizabethan seamen harried her commerce and attacked her ports.

> 'In fire and smoke Iberian ports involved,
> The trembling foe even to the centre shook
> Of their new conquer'd world, and, skulking, stole
> By veering winds their Indian treasure home.'

On the 6th February, 1595, Sir Walter Raleigh, who had received the support of the Lord High Admiral Howard and Sir Robert Cecil, started from Plymouth with five ships, among his officers being Captains

Gifford, Keymis, Cross, and Calfield. On the 22nd March, he arrived, with two ships, at the island of Trinidad, of which he made himself master. As soon as he was joined by the other ships, he proceeded in boats 400 miles up the River Orinoco, and returned, after an absence of more than a month, to Trinidad, whence he sailed for the West Indies and England, where he arrived in safety, his expedition being exceedingly applauded in prose and verse by all the reputed wits of those times. Sir Walter Raleigh and Captain Keymis, whom he sent to the coast of Guiana soon after his return, wrote descriptions of it, while that part of the coast from Trinidad to Carthagena, was the scene of many privateering expeditions during Elizabeth's reign.

The coast of Central America, as far as the Gulf of Honduras, was visited and described by several English seamen, particularly Captain Barker, and so was the Gulf of Mexico, where in 1568, Captain (afterwards Sir John) Hawkins sent on shore three men, David Ingram, Richard Brown, and Richard Twede, who travelled from a point about 140 leagues north of Cape Florida to within sixty leagues of Cape Breton, whence they were taken home by a French ship. In November, 1601, Captain William Parker sailed from Plymouth on a buccaneering expedition against the Spaniards, with three small vessels, carrying 208 men, the smallest of which, with fifteen hands, was lost at sea; with the two others he captured the island of St. Vincent and the town of Porto Bello, after a desperate resistance.

On the 26th March, in the following year, the Virginia Company sent Captain Bartholomew Gosnold, with a small vessel and thirty-two men, of whom it was proposed that twelve should stay behind and form a settlement. On the 11th May he arrived 'among the islands

forming the north side of Massachusetts Bay,' but not finding the place suitable, set sail and landed on a small island on the New England coast, which he called Elizabeth, and on another he called Martha's Vineyard. Here he built a fort, and, on the 18th June, sailed for Plymouth, where he arrived on the 23rd July. The last voyage made in Elizabeth's reign was by Captain Samuel Mace, of Weymouth, fitted out by Sir Walter Raleigh, as appears by a brief account in vol. iv. of Purchas, 'to find those people which were left there in the year 1587, to whose succour he hath sent five different times at his own charges.' But this attempt was as unsuccessful as those preceding it, for after making the land about forty leagues from Cape Hatteras, they returned through stress of weather.

The unsuccessful attempts by Sir Walter Raleigh—after whom the capital of North Carolina was named—to colonise America during Elizabeth's reign were renewed in that of James I. Mr. Richard Hakluyt, author of the most important collection of voyages in the language, at that time Prebend of Bristol Cathedral, applied, with other merchants of that city, to Raleigh, who was still regarded as the proprietor of Virginia, for a license to trade with America, which was granted under his hand and seal. Accordingly two small vessels, the *Speedwell*, fifty tons, and thirty men and boys, Captain Matthew Pringe, and the *Discoverer*, twenty-six tons, and eleven men, Mr. William Brown, sailed from King's Road, near Bristol, on the 20th March, 1603, and, proceeding by the Azores, examined the coast of America between 43° and 41° N. lat., where they landed and built a fort, which they named after Mr. John Whitson, Mayor of Bristol. On the 9th August they left the coast, and arrived in England on

the 2nd October. On the 10th May, in the same year, the *Elizabeth*, fifty tons, Captain Gilbert, who had sailed with Captain Gosnold, left Plymouth, and, after trading at St. Lucia and Dominica, arrived on the 25th July at the mouth of Chesapeake Bay, near to which the captain and four men were killed by the natives.

After the attainder of Sir Walter Raleigh, Lords Southampton and Arundel of Wardour fitted out a ship for purposes of discovery and trade, named the *Archangel*, which sailed from Dartmouth, under command of Captain George Weymouth, on the 31st March, 1605. On the 16th May they sighted Long Island, and anchored in a harbour of one of the adjacent islands, which they called Pentecost Harbour, because it was discovered about Whitsuntide. They also discovered and explored the neighbouring river, and after a stay of six weeks, during which they carried on a very profitable trade with the natives, sailed on the 16th June, and in thirty days sighted the Land's End.

Encouraged by the results of this voyage, two companies were formed under King James's letters patent, dated 10th April, 1606, for settling the Atlantic seaboard of what is now known as the United States, which was divided into North and South Virginia; one, known as the First Colony, consisting of the adventurers of the city of London—among whom is the name of Richard Hakluyt, Prebendary of Westminster—were to have the exclusive privilege of settling at any point between 34° and 41° of lat., a distance of fifty miles north or south along the coast, and 100 miles to the westward inland; and another company, consisting of the merchants of Bristol, Exeter, and Plymouth, including Raleigh, Gilbert, and Captain W. Parker, called the Second Colony, or Western Company, were to enjoy similar privileges

between 38° and 45°. These companies were empowered to coin money, raise forces for their defence, and seize any ships trading within the limits of their respective charters.

The London Company, on the 20th December, 1606, despatched an expedition, consisting of three vessels, of 120, 40, and 20 tons, with 110 colonists, under command of Captain Christopher Newport, which proceeded to the Caribbee Islands, and thence to the north of Chesapeake Bay, where they arrived on the 26th April. They first landed on the southern cape of the bay, and the fort they constructed was called after Henry, Prince of Wales, while the northern cape was called after Prince Charles, afterwards the unfortunate Charles I. The first great river they explored, the Indian name of which was Powhattan, they called James River, after the king, and, some fifty miles from its mouth, they established their first settlement, which received the name of James-Town. The governing body included Bartholomew Gosnold, Christopher Newport, who returned to England in June, and John Smith, whose superior administrative capacity was recognised a few years later by his unanimous election to the presidency.

Other vessels were despatched from England with supplies, and men and provisions for the colony, but upon Captain Smith's returning to England, owing to severe injuries he had received, the colonists became discouraged, and were on the point of sailing out of Chesapeake Bay, when they met the new Governor, appointed under a fresh Royal patent, Thomas West, Lord de la Warr, who, with Sir Thomas Gates, Sir George Sommers, and Captain Newport, and 500 men embarked in nine ships, had left England in July, 1609, but had been cast away on certain uninhabited islands, known as the

Bermudas, and also called after Sir George Sommers. Lord de la Warr obliged the colonists to return to James-Town, and, in the following year, leaving Mr. Pierce as his deputy, returned to England, where, for eight years, he devoted his time and energies to the service of the Company, and died, in 1618, on the voyage out to Virginia.

Sir George Yardly was now appointed Governor, and, in his time, we are told, negroes were first imported into Virginia as slaves;* after him came Sir Francis Wyat, Sir John Harvey, and Sir William Berkeley, who proclaimed Charles II., then in exile, before he was acknowledged in the three kingdoms. In 1632, Charles I. granted all the country north of the Potomac, not then settled, to Cecilius Calvert, Lord Baltimore, and it received the name of Maryland, in honour of Queen Henrietta Maria. On the 22nd November in the following year, Leonard Calvert, Lord Baltimore's brother, sailed with a party of Roman Catholics from England, and, on their arrival at Point Comfort, in Chesapeake Bay, on the 24th February following, settled at a place they called St. Mary's; after the Restoration, Charles Calvert, Lord Baltimore, governed the colony of Maryland for twenty years.

Admiral Coligny, in the reign of Charles IX., despatched Jean Ribaut to settle the country now called North Carolina, but it had been abandoned for a century by the French, when Charles II., under a patent, dated

* About 1674, exclusive permission was granted to the Royal African Company to trade in slaves, and we find that, in that year, Sir Jonathan Atkins, Governor of Barbadoes, had orders to seize and condemn all ships bringing slaves from Africa. After the Revolution of 1688, the trade in slaves was thrown open to all British merchants on payment of 10 per cent. towards the maintenance of the forts of the African Company.

24th March, 1663, granted it to the Lord Chancellor, Edward Hyde, Lord Clarendon, George Monk, Duke of Albemarle, and other noblemen; the grant included the whole country between 36° 30′ and 29°, now known as the Carolinas and Georgia. The plan of government elaborated by the famous Anthony, Earl of Shaftesbury, was found to be unworkable, and injurious to the interests of the planters, and at the end of sixty years was abolished, and the country surrendered to the Crown. Though the country about New York formed part of what was then known as Virginia, and was within the limits of the grant made by James I. to the Western Company, it was sold about the year 1608, by the navigator, Hudson, to the Dutch, who built a town on the island of Manhattan, at the mouth of the Hudson River, which they named New Amsterdam, now known as New York, and the bay to the east of it they called Nassau, and a settlement 150 miles up the river, Orange Fort. During the Dutch War, as a reprisal for the attack made by De Ruyter on our West African colonies, Sir Robert Carr reduced the whole of the Dutch province then known as New Belgia, and a portion of it received the name of New York from James II.

The first Europeans to settle in New Jersey were the Swedes, who had three towns named Christina, Elsinburg, and Gottenburg; but the Dutch settled it afresh, and Charles II. gave this tract, in his grant of Nova Belgia, to the Duke of York. Charles II. was very liberal in his grants of land, which enabled him sometimes to 'raise the wind' for his follies and dissipations, and was not even above selling to his country's enemies an important place like Dunkirk, which roused the

indignation of the author of the 'Seasons,' who denounced the

> 'Pensioned king,
> Against his country bribed by Gallic gold,
> The port pernicious sold, the Scylla since
> And fell Charybdis of the British seas.'

James II., when Duke of York, made over his province of New Jersey, under the name of Nova Caneria, to Sir George Carteret and Lord Berkeley. They divided it into two parts, Sir George Carteret taking East New Jersey, which borders on New York, and naming it after the island of Jersey to which his family belonged; and Lord Berkeley the western portion bordering on Pennsylvania. On the 22nd April, 1702, the proprietors of both portions placed them in the hands of Queen Anne, and their government was afterwards vested in the Crown.

The first to project settlements on the Hudson's Bay were two Frenchmen, Radison and Gooselier, who, having visited the bay, offered to take ships thither, first to the merchants at Quebec, and then to the King of France, though their proposals were rejected. The English ambassador at Paris, however, suggested to them to try their fortune in London, and here they met with better success. Some people of quality and merchants engaged Mr. Gillam who was long connected with the New England trade, and in the year 1667 he sailed in the *Nonsuch*, ketch, into Baffin's Bay to 75°, and thence southward to 51°, when he entered a river which he named after Prince Rupert, and finding the natives disposed to trade, erected a small fort which he called after Charles. The success of this expedition was so marked that, on the application of the persons who had fitted out the *Nonsuch*, Charles II. granted a patent, under date May 2nd, 1670, to Prince Rupert, Sir James

Hayes, and others, constituting the Hudson's Bay Company, which ultimately acquired an importance only second to that of the English East India Company, while its territories were perhaps of vaster extent. In 1670 the Company sent Mr. Charles Baily as their first Governor, who, with Mr. Radison, settled at Rupert's River, and, in 1686, they had five settlements at Albany River, Hayes Island, Rupert's River, Fort Wilson, and New Severn. In that year, the French from Quebec, under Chevalier de Troyes, took the three first-named factories; but, in 1693, they were retaken by the Company, assisted by the Government, though they soon again changed hands. In 1696, King William sent two men-of-war, the *Bonadventure* and *Seaford*, under Captain Allen, who retook the forts, but was killed in an engagement with the *Mary Rose*, French privateer of fifty guns. In the following year the *Hampshire* frigate and *Owner's Love*, fireship, were lost in Hudson's Bay, and all hands were drowned. During the French War the Company lost all their settlements but Fort Albany; but by the 10th and 11th Articles of the treaty of Utrecht, they were restored to them.

The Western, or Plymouth, Company contented themselves for some years, after receiving their patent, with trading with the natives of what was called North Virginia, in contradistinction to South Virginia, which belonged to the London Company. In 1614, when two ships were employed here fishing, under the command of the governor, Captain John Smith, and Captain Thomas Hunt, the former explored the country of Massachusetts, but subsequent attempts to settle there ended in failure, owing to the hostility of the Indians, due to the conduct of Captain Harlow, in 1611, and three years later, of Captain Hunt, who kidnapped the natives,

the latter officer having enticed twenty-seven on board his ship, whom he sold as slaves at Malaga.

After the failure of Captain Dormer to form a settlement in Massachusetts Bay, in 1619, the Company gave up the attempt in disgust; but some Dissenters, in order to enjoy the religious freedom denied to them in England, procured, through Sir Robert Nanton, the king's consent to their transporting themselves to America. Accordingly, on the 6th September, 1620, about 120 persons sailed from Plymouth in the *May Flower*, of 180 tons, intending to found the colony in the Hudson's River, but, meeting stormy weather, landed at a place they named New Plymouth in 42° N. lat. The colonists, including women and children, were about 100. The historian of the 'Pilgrim Fathers' mentions nineteen families, and gives the names of forty-one effective men, including John Carver, governor, and John Brewster, assistant to their minister, Mr. Robinson, and ruling elder of their church; but so great were the fatigues encountered by this infant colony during the first winter, that, of 100 souls, fifty died within the space of two months. But Providence watched over them, the Indians made no attack on them in their weakness, and the settlement in Plymouth Bay grew and strengthened until it developed into the flourishing communities known as the New England States. According to Harris (vol. ii. p. 234), the name of New England was given to this country by Charles I. (then Prince Charles), before whom Captain Smith, after his visit in 1614, laid a map he had drawn of the country, with full information regarding its products.

In the year 1625, Mr. White, minister of Dorchester, projected a new settlement in Massachusetts Bay, and, in 1630, a fleet of ten ships, with 200 colonists, pro-

ceeded thither under John Winthrop as governor. These settlers erected Charlestown on the north side of the Charles River, Dorchester at the bottom of Massachusetts Bay, and Boston. Divisions breaking out among them, one Roger Williams settled a new plantation at Providence, which was afterwards united to the government of Rhode Island. In 1636, settlements were founded at Hartford, Windsor, Springfield, on the Connecticut River, and, in the following year, colonies were established at Long Island and New Haven.

The Bermudas, so called after Juan Bermudez, a Spaniard, who discovered them in 1527, were frequently visited by his countrymen on their passage to the West Indies, but were unknown to us until the year 1593, when Henry May was shipwrecked upon them in a French vessel, and gave an account of the group.* When Sir George Sommers, or Summers, visited them, two men, Carter and Waters, remained behind on the largest island, called St. George, which is about sixteen miles in length, and, on the occasion of the second visit of Sir George Summers, who died here, they were joined by a third seaman, one Chard. In the following year, the ship *Plough*, commanded by Captain Matthew Sumers, arrived from England with sixty colonists, under Richard Moor as governor, who built the town of St. George, and, in the year 1614, repulsed an attack of the Spaniards. He was succeeded by Captain Daniel Tucker, an excellent governor, in whose time five men performed the desperate feat of sailing to Ireland in forty-two days, in a decked boat, of two or three tons, built by themselves. In 1619, a new governor, Captain

* Recently Lieutenant-General Sir Henry J. Jefroy, K.C.M.G., C.B., has written a history of these islands, of which he has been governor.

Butler, arrived with 500 colonists, and established the government of the 'still vexed Bermoothes' on a suitable footing.

In the year 1618, Sir Samuel Argall, the Governor of Virginia, went on a cruise round the coast within the limits of the patent of his Company, which included Acadia, now known as Nova Scotia, and, finding a French ship and settlement near Cape Cod, captured the former and drove the garrison out of the fort, as well as from a second settlement at a place they called Port Royal, on the south-west coast of Nova Scotia. In the year 1623, Sir William Alexander, afterwards Earl of Stirling, having secured a grant from James, established a colony at Luke's Bay, near Cape Sable in Nova Scotia, and wrote a book descriptive of this plantation, while James created a new order, called the Knights of Nova Scotia. Some years afterwards the French purchased Sir William Alexander's grant of this country, and of the northern part from Sir David Kirk, for £5000, but, in 1690, they were dispossessed by Sir William Phipps, Governor of New England, though the country was returned to them by the terms of the treaty of Ryswick, in 1697.

The island of Cape Breton followed the fate of Nova Scotia, and both continued in the possession of the French, until the year 1710, when Governor Nicholson made himself master of Port Royal, which was called after the queen, Annapolis, and which, with Nova Scotia, was confirmed to the English Crown by the 12th Article of the treaty concluded at Utrecht, in 1712. Ultimately, in the year 1759,* the whole of Canada fell

* Quebec and the French settlements in Canada were reduced by the English in 1626, but were restored six years later. Quebec was again unsuccessfully besieged by the English in 1711, and in 1763 its possession was finally secured by treaty to this country.

into the hands of the English, the last scene of the tragic drama being the capture of Quebec, and the heroic deaths of Generals Wolfe and Montcalm.

The scheme projected by Sir Walter Raleigh for the colonisation of Guiana, which was said with truth to possess rich gold mines, was not suffered to fall through; he himself was engaged in the expedition to Cadiz and in the voyages to Virginia, and then his imprisonment intervened; but, on the 21st March, 1604, Captain Charles Leigh undertook a voyage to Guiana, at his own and his brother Sir Olive Leigh's charge, in a vessel, of fifty tons, called the *Olive Plant*, having a crew of forty-six men and boys. Captain Leigh arrived on the 22nd May, at a branch of the Orinoco River, known as the Wyapoco, in 8° 30′ N. lat., and made a settlement on the west side of the entrance, to which he gave the name of Mount Howard. In June, of the following year, he sent his ship to England for fresh supplies, retaining thirty-five of the crew; but they were attacked by fevers, of which Captain Leigh and several men died, when the remainder found their way to England. Meantime Sir Olive Leigh had despatched a second vessel, called the *Olive Blossom*, on the 14th April, 1605; but the crew put in at St. Lucia, where they settled, and were treacherously attacked by the natives, when, of sixty-eight sailors and colonists, only nineteen escaped with their lives. The survivors, of whom twelve were wounded, ventured to sea in a miserable boat, with only five gallons of water and a little rice and biscuit, and, after being ten days at sea, arrived at an uninhabited island, whence five men proceeded in the boat to the continent, and brought relief to their companions. Ultimately, thirteen reached a Spanish town called Coro, of whom eight died, and five went to Carthagena, whence they procured a passage to Spain.

In 1609, a fresh attempt to colonise Guiana was made by Robert Harcourt, who fitted out three vessels—the *Rose*, of eighty tons; the *Patience*, of thirty-six tons; and the *Lily*, of nine tons—which sailed from Dartmouth on the 29th March, and arrived in the Bay of Wyapoco on the 17th May. Mr. Harcourt explored the neighbouring country, and his brother and Captain Harvey proceeded by sea to the 'Arrawarry,' 100 leagues distant, which they ascended for some fifty leagues. On the 18th August Mr. Harcourt sailed to England for supplies, and on his return, obtained a patent for all that coast as far as the river Amazon. Sir Walter Raleigh, on obtaining his release from the Tower, fitted out, at his own expense and that of friends, a fleet of seven vessels,* which, before he left the coast, had increased to fourteen sail, so great was his reputation.

On the 19th August, Raleigh sailed from Cork, where he had put in through stress of weather, and arrived at Wyapoco on the 11th November. On the 4th December they sailed again, and on the following day arrived at the Triangle Islands, whence he sent up the river to the gold mine five of the small vessels, each with fifty men. Captain Keymis who was in chief command, came to the Spanish town of St. Thomas, near the main channel of the Orinoco, and on the 2nd January was attacked by the Spaniards; but though they were re-

* The *Destiny* (built by himself), 440 tons, 36 guns, and 200 men, of whom 80 were gentlemen; *Jason*, 240 tons, 25 guns, and 80 men, Captain John Pennington; *Encounter*, 160 tons, 17 guns, Captain Edward Hastings (and on his death Captain Whitney); *Thunder*, 150 tons, 20 guns, 70 men and 6 gentlemen, Captain Sir Warham St. Leger; *Flying Joan*, 120 tons, 14 guns, and 25 men, Captain John Chidley; *Southampton*, 80 tons, 6 guns, 25 men, Captain John Bayley; and the *Page*, pinnace, 25 tons, 8 men, Captain James Barker.

pulsed with heavy loss, he was obliged to give up the attempt of reaching the mine, and returned, having suffered heavily, among the killed being young Walter Raleigh, who fell fighting with a gallantry worthy his sire. On his return, Keymis committed suicide, and the ships being leaky, and officers and men in mutiny, Sir Walter, disappointed at the failure of his plans, returned to England, when he was arrested by the king's order, at the instigation of the Spanish ambassador, Gondomar, and conveyed to the Tower, whence, to the eternal disgrace of James, he was only released by the headsman's axe on the 29th October, 1618. This pedant prince, as has been said of him,

> 'drunk with flattery, dreamt
> His vain pacific counsels ruled the world;
> Though scorn'd abroad, bewilder'd in a maze
> Of fruitless treaties; while at home enslav'd,
> And by a worthless crew, insatiate drain'd,
> He lost his people's confidence and love.'

Thus it happened that James permitted his son-in-law, Frederick, the Elector Palatine, who had been chosen King of Bohemia, to be stripped of his dominions by the Emperor Ferdinand, and, baser still, gave over his greatest subject to the executioner for offences against the Spanish Court committed long before, and condoned by subsequent employment:

> 'Triumphant Spain the vengeful draught enjoy'd;
> Abandon'd Frederick pined, and Raleigh bled.'

In old Chaucer's words, Raleigh was 'a very parfit gentle knight,' whom all generations of his countrymen have delighted to honour. He was, says the elder D'Israeli,* the 'adored patron' of Spenser, Ben Jonson

* See Isaac D'Israeli's 'Curiosities of Literature,' in which are interesting papers from MS. sources, detailing the circumstances of

called him his literary 'father,' and he left political instructions which Milton 'deigned to edit.' Equally great as a military and naval commander, as a statesman and politician who recognised England's mission as the great coloniser of the world, Raleigh was not less remarkable as a poet and writer almost of the first class. This 'great but ill-regulated mind,' as Hume speaks of him, wrote the celebrated fragment, 'The History of the World' of which that eminent philosophic historian says: 'They were struck with the extensive genius of the man, who, being educated amidst naval and military enterprises, had surpassed in the pursuits of literature even those of the most recluse and sedentary lives.' But chivalric in life, Raleigh's heroism shone forth grandly in the time of failure and affliction, and with a still brighter lustre in the hour of death, when his fortitude and irreproachable bearing on the scaffold melted the hearts of the thousands who witnessed the passage of this great soul 'from death unto life eternal.'

His poetic feeling, which called forth the admiration of 'rare' Ben Jonson, is apparent in the solemn lines he penned on the night before his execution, which form a fitting conclusion to this brief notice of one of England's most-treasured worthies.

'Even such is Time, that takes on trust
Our youth, our joys, our all we have,
And pays us but with age and dust;
Who in the dark and silent grave,
When we have wandered all our ways,
Shuts up the story of our days.'

The first to make a settlement in Guiana was Lord Willoughby, who, when Governor of Barbadoes, ob-

Raleigh's apprehension at Plymouth on his return from his disastrous expedition to Guiana, of his betrayal by his friend Stucley, and his last moments.

tained a grant of this country from Charles II., and established a colony at Surinam.* We find that in 1666, Guiana was held by the French, Dutch, and English; but in that year the Dutch despatched four ships of war and 300 men, under Commodore Creissen, who sailed three leagues up the Surinam river to the fort at Paramaribo, which he captured. By the peace of Breda, it was agreed that the Dutch should retain Surinam, and we New York, which was then called New Amsterdam.

It is uncertain when or by whom the island of Barbadoes was discovered, but the first Englishmen to land here were some seamen from Sir William Curteen's ships, that were cruising in those seas in the latter part of the reign of James. Some adventurers went thither, but soon took their departure, and the island was granted by Charles I. to James, Earl of Carlisle, in the first year of his reign. It was soon after colonised, and in 1647, some of the adherents of Charles settled here, and cutivated sugar, and the chief settlement, called Bridge-Town, or St. Michael's, is situated in a bay on the south-west side of the island, which received the name of Carlisle after the proprietor. The island became so rich and prosperous, that in 1651 the Rump Parliament sent a strong squadron of men-of-war, under Sir George Ascue (or Ayscough), who compelled Lord Willoughby to acknowledge its authority, and Mr. Searl was appointed Governor in his place. Charles II. in 1663 purchased the island of Lord Kinnoul, heir to the Earl of Carlisle, and appointed Lord Willoughby of Parham, Governor, and three years later the Barbadians beat off Admiral de Ruyter, who attempted with a large

* British Guiana, as now known, was taken, in 1781, by Sir George Rodney, was restored two years later, was again captured and restored in 1801, and finally conquered in 1803.

fleet to surprise the island. Barbadoes is the most eastward of the West India Islands, and the principal of the Windward Islands, which include St. Vincent, Grenada, Tobago, and St. Lucia. St. Christopher, or St. Kitt's,—one of the Leeward Islands, which include Antigua, Nevis, Montserrat, Dominica, and the Virgin Islands,—was occupied, early in 1627, by English and French colonists, the former under Sir Thomas Warner, and the latter under M. Desnambrie, who agreed to articles of division on the 13th May. In 1629, the island was captured by Frederick de Toledo, who arrived from Spain with a fleet of twenty-four large ships, but it reverted to its original owners the same year; eventually the English drove out the French, and, by the treaty of Utrecht, St. Kitt's remained in possession of the English Crown.

In 1628, Sir Thomas Warner settled Nevis, and at one time this island was in a more flourishing condition than any of the Leeward Islands, and, though scarcely six miles long, was said to maintain a population of 10,000 Europeans and 20,000 negroes. Montserrat (so called by Columbus from a mountain near Barcelona) was occupied by Sir Thomas Warner in 1632, Dominica and Barbuda about the same time, Anguilla, or Snake Island, in 1650, and Antigua in 1663, by Lord Willoughby, Governor of Barbadoes.

The Lucayos, or Bahamas,—which include New Providence, Great Abaco, Great Bahama, Long Island, Eleuthera, Great Inigua, and St. Salvador, the first land in the New World sighted by Columbus,—were first visited, in 1667, by Captain Sayle, who, when proceeding to Carolina, was driven by a storm on the island he named New Providence. Charles II. made a grant of the Bahamas to the Duke of Albemarle, Lords Craven,

Ashley, and Berkeley, Sir George Carteret and others. In 1672, Mr. Chillingworth proceeded to colonise New Providence, and, about 1693, Mr. Nicholas Trott, then governor, built the town of Nassau. The island was captured and plundered by the Spaniards about 1680, and again in July, 1708, after which the English settlers deserted it. The Bahamas were, however, re-occupied, and twice again plundered by the Spaniards and French, upon which, in March, 1714, the House of Lords addressed Queen Anne to provide for their defence, but nothing was done. Four years later, a second address was moved to George I., upon which, in 1718, Captain Woods Rogers, who, eight years before, had made an important voyage of discovery to the South Seas, was appointed governor, and sailed for Nassau, with the frigates *Rose* and *Milford*, to put down piracy which was rampant in these waters. Captain Rogers compelled the freebooters to surrender, and took possession of the fort on the 27th July, and, soon after, the neighbouring islands of Eleuthera and Abaco were settled.

In 1654 took place the expedition for the conquest of the island of Hispaniola, under Generals Penn* and Venables, and Admirals Goodson and Blagge, but which, owing to dissension among the commanders, ended in failure, though there was a considerable fleet and army. However, the island of Jamaica was reduced, and has ever since remained in the possession of the Crown of England.

The first settlements formed by the English in Central America, for the purpose of cutting logwood,

* This General Penn (or Admiral, as he was indifferently called) served in the fleet under the Duke of York during the Dutch war with great credit, and was created Sir William Penn. His kinsman received a royal grant, which had been promised to Sir William, of the country known as Pennsylvania, bearing date 4th March, 1680.

were about the year 1667, and three years later, Spain transferred them by treaty to this country. The English first settled near Cape Catoche, the north-east promontory of the peninsula of Yucatan, and also at the islands of Triste and Campeachy. In 1680, the Spaniards dispossessed the logwood-cutters of their settlements at Triste and elsewhere, but they were retaken, and, by the treaty of Utrecht, in 1713, were formally vested in their proprietors.

Thomson, in his poem of 'Britannia,' echoes the indignant remonstrances of his contemporaries at the impunity with which the British Government permitted the Spaniards to commit their depredations on the logwood-cutters of Campeachy, whose rights were guaranteed by treaty. In this poem, which owed its inception to the popular indignation at these outrages, which culminated in the declaration of war in 1739, the patriotic poet prophesies the future victories of the navy reviving the glories of Drake, Raleigh, and Blake:

'E'en not the flattering view of golden days,
And rising periods yet of bright renown,
Beneath the Parents,* and their endless line
Through late revolving time, can soothe my rage;
While, unchastised, the insulting Spaniard dares
Infest the trading flood, full of vain war
Despise my navies, and my merchants seize;
As, trusting to false peace, they fearless roam
The world of waters wild; made, by the toil
And liberal blood of glorious ages, mine;
Nor bursts my sleeping thunder on their head.'

* George and his queen.

END OF VOL. I.

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